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# INSIGHT

## POLYTECHNIC

**THE MAHARAJA SAYAJIRAO  
UNIVERSITY OF BARODA**

**VOLUME: 5**

**JULY 2024 TO DECEMBER  
2024**



# From the desk of Honorable I/c Vice Chancellor



## E Newsletter Polytechnic 2024-25

### Volume 5

From the Desk of Honorable I/c Vice Chancellor- Prof. (Dr.) Dhanesh Patel

Dear Members of the Polytechnic Family,

It gives me great pleasure to offer my congratulations to the entire Polytechnic community at The Maharaja Sayajirao University of Baroda for its incredible dedication and efforts in providing quality diploma engineering education.

It's truly promising to witness the unwavering commitment of our faculty members, and staff in nurturing the talents and dreams of our students. Your collective efforts have transformed Polytechnic into a shining example of excellence, where innovation, creativity, and technical brilliance thrive.

I congratulate Polytechnic on achieving prestigious **NBA Accreditation** for five Diploma Engineering Programmes, namely Civil Engineering, Mechanical Engineering, Electrical Engineering, Petro chemical Technology and Information Technology. I appreciate efforts of Principal and staff members to initiate Clubs : **Yuva Tourism Club, Standards Club, Eco Club and Unnat Bharat Abhiyaan**. I congratulate the initiative taken for an e-newsletter dedicated to showcase the incredible work and achievements of our Polytechnic community.

Let us look forward to many more milestones as we grow together in pursuit of knowledge, sustainability, and innovation.

A handwritten signature in black ink, consisting of stylized initials and a surname, likely 'Dhanesh Patel'.



# From the Desk of the Principal (Offg.)



## E Newsletter Polytechnic 2024-25

### Volume 5

**From the Desk of Principal (Offg.) – Prof. (Dr.) Dhanesh Patel**

It is my absolute privilege to announce the launch of the fifth volume of our institute's e-newsletter, *INSIGHT*. This launch represents not just another milestone for our institution but also an opportunity to reflect on some vital themes that shape our journey: holistic and continuous education, sustainable practices for environmental conservation, and innovations in the field of engineering.

In today's world, where environmental challenges are becoming more pressing than ever, sustainable practices must be at the core of everything we do. As an institute, we have integrated sustainability into our curriculum and campus operations. From promoting energy efficiency and waste reduction to encouraging projects that focus on renewable energy and green technologies, we are committed to shaping engineers who not only innovate but also prioritize the well-being of our planet.

At our Polytechnic, we take pride in fostering a culture of creativity and problem-solving. Through hands-on projects and collaboration with industry leaders, our students are encouraged to explore new ideas and develop solutions that address real-world challenges. **Five Diploma Engineering Programs** of our Polytechnic has received the prestigious **NBA Accreditation** ensuring global standards in engineering education. We have started several Clubs : **Yuva Tourism Club, Standards Club, Eco Club and Unnat Bharat Abhiyaan.**

*INSIGHT* is a platform for innovative ideas and to showcases the talents, creativity, and hard work of our community, highlighting not just what we have accomplished but also the vision we hold for the future.

I want to take this moment to extend my heartfelt appreciation to the editorial team and the contributors behind *INSIGHT*. May this edition encourage us all to dream bigger, act responsibly, and strive for excellence in all our endeavours.

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# **I/c Heads:I/c Lecturers: Coordinators:**

As on D.31/01/25

- Shri Hitesh Dhamecha (Civil)
- Shri Sandeep Gokhale (Mechanical)
- Shri Hitesh Baria (Electrical & IT)
- Dr. Khyati Shah (Petro Chemical Technology)
- Ms. Deepali Ghelani (Applied Mechanics)
- Dr. Mukesh Chavda (Applied Physics)
- Dr. Rakesh Patel (Applied Chemistry)
- Mr. Dhruvit Trivedi (Applied Mathematics)
- Dr. Dharmishtha Viswakarma (Electronics & Communication)
- Mrs. Sheetal Shinkhede (Computer Engineering)
- Shri Hitesh Dhamecha (Architectural Assistantship)
- Shri Ashok Nakum (Training & Placement Officer & NCC Co coordinator)
- Mr. Shemal Parmar (NSS Program Officer Polytechnic)
- Shri Ashish Guruji (Coordinator- Community and Extension)
- Dr. Mukesh Chavda (Dean of Students)
- Shri Hitesh Baria (Sports coordinator)
- Shri J.G. Kuchadiya (I/C Workshop Supdt.)

# E- Newsletter Committee

2024-25

## Co-ordinator :

Mrs. Rakhi Moghe (English)

## Members:

1. Mr. Chirayu Pandit (Civil Engineering)
2. Mr. Ashok Nakum (Mechanical Engineering)
3. Mr. Dharmesh Prajapati (Mechanical Engineering)
4. Mr. Pradeep Parmar (Electrical Engineering)
5. Ms. Vidhya Joshi (Information Technology)
6. Mr. Brijesh Prajapati (PCT)

7. Mrs. Anjana Rana (Applied Mechanics)

8. Mr. Ashish Jaituni (Applied Physics)

9. Dr. Bhavita Mistry (Applied Chemistry)

10. Ms. Jyoti Joshi (Applied Mathematics)

11. Ms. Ritu Shah (Computer Engineering and Electronics & Communication)

12. Ms. Jaimina Patel (Architectural Assistantship)

## Designing Team:

1. Shlok Shah (FYDIT)

2. Ved Thakkar (FYDIT)





## **Kargil Vijay Diwas** **Celebration** **06-07-24**

**2 Officers 3 ANO, 3 JCO, 8 PI staff & 198 cadets of 1 GCTR, 3 Guj Bn, 1 Air and 2 Naval Vadodara Celebrated Kargil Vijay Diwas on 6<sup>th</sup> July 2024 at central Auditorium of Faculty of Technology and Engineering, MSU, Vadodara by inviting Kargil war veteran Col Rajeev Bharwan, Gurkha Rifles Regt, The Officer motivated cadets to join the armed forces**

**50 cadets from Polytechnic and 50 Cadets from Faculty of Technology participated in this event.**



**A Rally by NCC Cadets  
for Waste Management  
under  
Swachhta hi Sewa  
01-10-24**







## **PADH YATRA FROM SABARMATI TO DANDI BY NCC CADETS (9<sup>th</sup> DECEMBER TO 23<sup>rd</sup> DECEMBER, 2024)**

- A Padh Yatra was organised by NCC and DTE from 9<sup>th</sup> December to 23<sup>rd</sup> December 2024. Cadets of various unit of NCC of Gujarat participated in PADH YATRA FROM SABARMATI TO DANDI.

- FROM POLYTECHNIC College LCPL Hetvi Shah, second year of Architecture Assistantship participated in the same. She walked approximately 400 Km from Sabarmati to Dandi. To encourage cadets, Hon Governor Acharya Devvrat met all cadets at Rajbhavan. All cadets walked almost 40-50 Km daily. During Padh Yatra, they visited various Ashrams of Gandhiji







**One Day Workshop on Industrial Automation  
& Embedded system  
D.26/12/24  
Expert: Er.Nandha Chirag A.  
Sr. Automation Project Engineer  
Sumit Empowering Automation Pvt.Ltd.**



**ONE DAY  
WORKSHOP  
DEPARTMENT OF  
ELECTRICAL  
ENGINEERING  
D.27/12/24  
EXPERT: ER.NANDHA  
CHIRAG A.  
SR. AUTOMATION  
PROJECT ENGINEER  
SUMIT EMPOWERING  
AUTOMATION  
PVT.LTD.**





# ACADEMIC TALKS

## Expert Lecture on Ethical Hacking: Safeguarding the Digital World

D.14/09/24

for final year students of Diploma Electronics & Communication (HPP)

Resource Person: Mr. Sumit Chawla is a Founder & CEO of Ultron Technologies, Venom Technologies





# Expert talk on Career Counselling for Diploma students

D.21/12/24

For students of Computer  
Engineering Department  
(HPP)

• Resource person:

Ms. Ankita Patel,  
Lead Corporate Recruiter, Rang  
Technologies Inc., Vadodara

Vadodara, Gujarat, India  
Government Polytechnic Ms University, Ricky Rd, Sardar Nagar,  
Nizampura, Vadodara, Gujarat 390002, India

Lat 22.323777° Long 73.178231°  
21/12/24 12:03 PM GMT +05:30





# Expert Talk on Career Advancement for SYDiploma Electrical Engineers on the occasion of Engineers' Day

D.14/09/24

**Resource person:**

**Ms. Manashree Devaskar,  
Electrical Design Engineer,  
Hydro Services  
GE Vernova**





# **Expert Talk on Metering and Commercial Aspects of Solar Energy on Engineers' Day D.14/09/24**

**For TY Diploma Electrical  
Engineering students**

- **Speaker: Mr. Umesh Parikh**  
**General Manager**  
**MEC Power Solution Ltd.**







**Expert Talk on From Seed to Scale:  
Securing your start up's future  
D. 11/10/24**

**Speaker: Mr Bhaumik Merchant, CEO  
& Co founder at forenzy Networks**





## Expert Talk on Introduction to cucumber framework with JAVA D.14/09/24

For Second year and final year  
students of Information Technology

Resource person : Mr. Kandarp Bhatt  
MRI Software India Pvt. Ltd.







**Expert Lecture on  
Communication Skills  
D. 22/09/24**

**For Final year PCT Students**

**Speaker: Vedanshi Bhatt, Worley Services India Pvt. Ltd.,  
Vadodara**





## **Expert Lecture on Overview of refinery. D. 17/12/24**

**For Second Year & Final year  
PCT Students**

**Speaker: Nimesh Trivedi,  
HPCL Mittal Energy Ltd.**





# Field Visits:

**Visit to GSRTC Division Workshop  
for third year Mechanical Engineering  
students.**

**D. 22,23,24 July and 8 August 2024**







**VISIT TO ELECON  
ENGINEERING CO  
LIMITED ,ANAND  
ON ENGINEER'S DAY  
D.15/09/24**

**For Third Year Diploma  
Mechanical Engineering  
Students**







**Visit to Plasticulture Development  
Centre of Reliance Industries Ltd  
Vadodara  
D.27/12/24**

Students learnt about various advance techniques of farming in Agriculture, Horticulture and water storage including Green house, Vermicomposting, drip, Mulching, sprinkler, pond liners, bird safety measures etc.





# **Industrial Visit at Reliance Polyester Limited, Dahej D. 11/09/24**

**Final Year PCT students**







## Student Activities

**Model Making of  
Saputara Hills by Final  
year Architecture  
students  
D.24/12/24**







**Teachers' Day Celebration by Department of Electrical Engineering**  
**D.05/09/24**



# Teachers' Day Celebration by Department of Petrochemical Technology

D.05/09/24







Speaker: Capt. Ashok Nakum, Polytechnic, The Maharaja Sayajirao University of Baroda

## **Lecture on 3R/5R/7R for waste Management.**

**D.01/10/24**





# A Debate on “Innovate from Waste”

D.27/09/24





## A Visit to EME Temple (Dakshinamurthy Temple) D.05/09/24

Organized by Yuva Tourism Club,  
Polytechnic on Teachers' Day to  
enhance the knowledge of  
students and cultivate interest  
towards our heritage buildings  
and tourism.

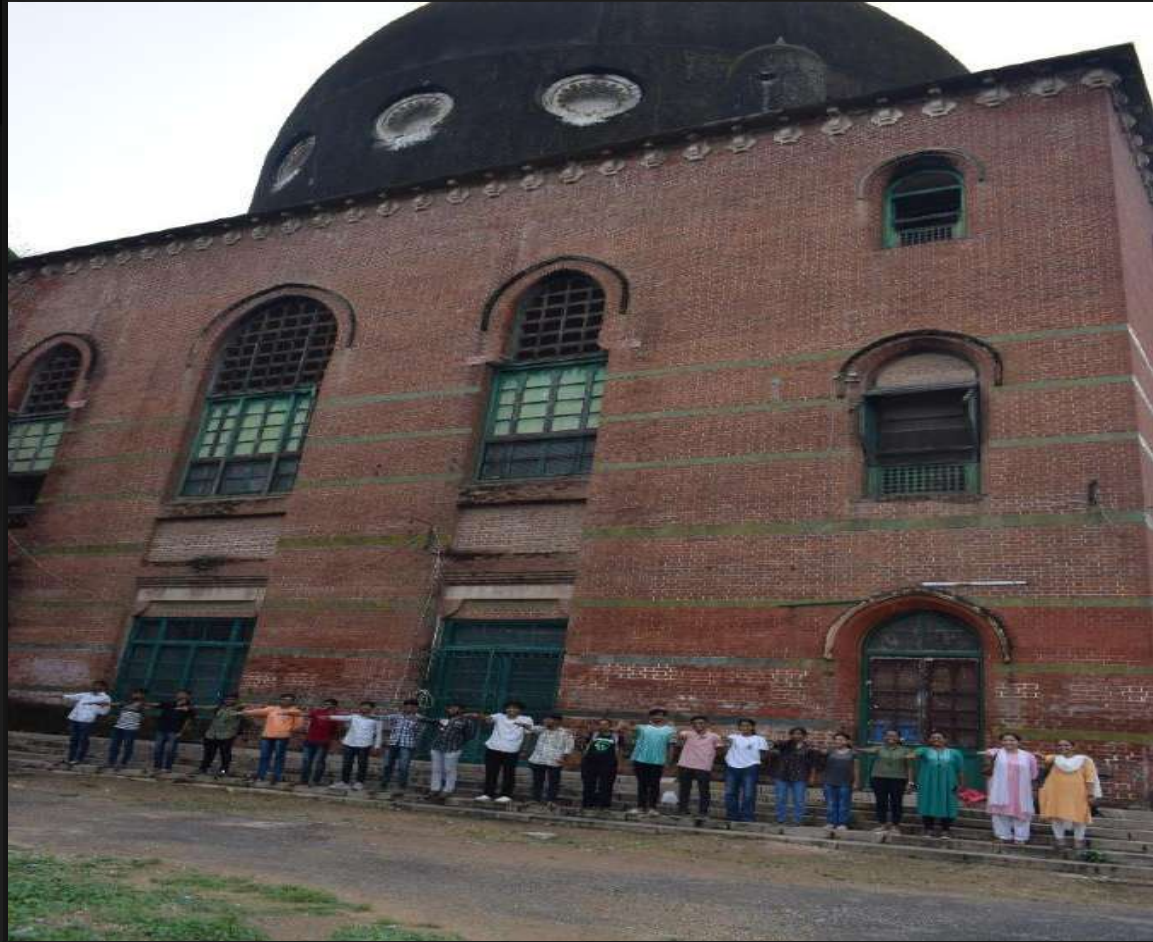




VISIT TO PREMANAD HALL, FACULTY OF  
ARTS TO CELEBRATE WORLD TOURISM  
DAY-27-9-2024

Organized by **Yuva Tourism Club**, Polytechnic





**MAKING A HUMAN CHAIN  
AND TAKING OATH TO CURB  
PLASTIC POLLUTION.**

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**A Cycle rally from  
Polytechnic to Arts faculty  
on D. 27/09/24**





GPS Map Camera

Vadodara, Gujarat, India

Abhar Society, 502, Sardar Nagar, Nizampura, Vadodara, Gujarat 390002, India

Lat 22.323168°

Long 73.178196°

01/10/24 12:10 PM GMT +05:30

# ESSAY WRITING COMPETITION 2024

## SWACHHTA HI SEWA 2024

### D.02/10/24

organized by Department of English,  
Polytechnic



# 2024 ESSAY COMPETITION

Polytechnic, The Maharaj Sayajirao University of Baroda.

- On 1st October, 2024 "Essay Competition" is conducted in Polytechnic.
- The topics and further instructions of essay competition are mentioned in the given link and for taking participation fill up the form.

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## PUBLICATIONS:

## RESEARCH ARTICLE

1. Effect of Surfactant of Azo Dyes by Sodium Hypochlorite

Dr. Nilesh B. Padhiyar, Dr. Rakesh G Patel, Journal of Technology, Vol. 12 (10), 2024, (I.F: 5.1)

Review Article:

2. A review of Metal-based Atom Transfer Radical Polymerization and Its New Direction

Dr. Bhavita Mistry, Niravkumar Joshi, Prof. C. N. Murthy, Journal of Technology, Vol. 12 (11), 2024 (I.F: 5.1)

Doi: [18.15001/JOT.2024/V12I11.24.881](https://doi.org/10.15001/JOT.2024/V12I11.24.881)

3. Mixed matrix PES membranes incorporated with r-GO and f-r-GO with improved metal removing capacity

Dixita P. Prajapati, C. N. Murthy, Membrane and Water Treatment, Vol. 16, No. 1, 2025

<https://doi.org/10.12989/mwt.2025.16.1.000>

4. Sagar K. Bairwa, Srujal A. Sonera, N.D. Chavda, R.C. Tandel,

Cholesterol-based mesogenic Schiff's base derivatives: Biological evaluation, photoluminescence and DFT studies,

Journal of Molecular Liquids, Volume 410, 2024, 125649,

<https://doi.org/10.1016/j.molliq.2024.125649>



## PUBLICATIONS:

## RESEARCH ARTICLE

5. Sonera, S. A., Bairwa, S. K., & Tandel, R. C.

Symmetrical homologous series of thiadiazole derivatives containing azomethine linkages: synthesis, characterization and mesomorphic properties.

*Molecular Crystals and Liquid Crystals*, 1-14.

<https://doi.org/10.1080/15421406.2024.2422158>

6. Study on Gas Permeability and Selectivity in Metal Oxide-Doped g-C<sub>3</sub>N<sub>4</sub>/PC Membranes with Metal-Doped Fillers

Dr. Pratikkumar C. Lakhani, *International Journal of Hydrogen Energy*, vol.85, 2024, p.287-298

7. Support Materials Impact on Green Synthesis and Sustainable Processing via Heterogeneous Catalysis

Dr. Pratikkumar C. Lakhani, *Discover Catalysis*, vol 1, 2024



Publication: Book Chapters  
Dr. Pratik kumar Lakhani, Department of Applied Chemistry,  
Polytechnic

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Sr. No.	Book Title	Publisher Name	Year	Ch. No. pp. No.	ISBN
1	Photocatalytic Water Splitting	Springer Nature	2024	26, 643-666	978-3-031-66259-1
2	Carbon Nanotube-Polymer Nanocomposites for environmental remediation and dye degradation studies	Springer Nature	2024	7, 155-179	978-981-97-6328-3



# **Awards:**

- **Award for Best Poster Presentation received by Dr. Pratikkumar Lakhani : Chemistry: Global Trends & Future Directions-(CGTFD-2024), Madanapalle Institute of Technology & Science, Annamayya, Andhra Pradesh, India, 2024 (International)**