

KATHAN

E-Magazine of UPL University of sustainable Technology



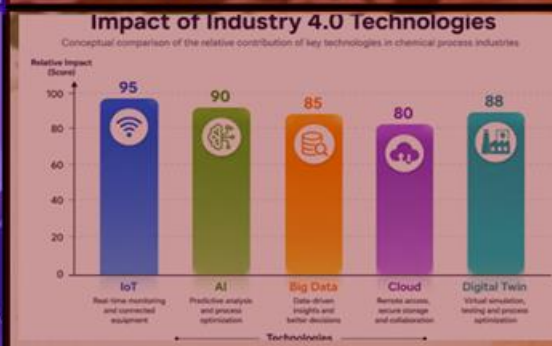
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About the UPL University of Sustainable Technology

The journey of **UPL University of Sustainable Technology** is rooted in a strong legacy of industry-oriented technical education that began in 2011 with the establishment of **Shroff S. R. Rotary Institute of Chemical Technology (SRICT)** by Ankleshwar Rotary Education Society (ARES). Initially established as a GTU-affiliated engineering institute with AICTE approval, SRICT developed specialized undergraduate programs that integrated chemistry, chemical engineering and industrial technology, particularly in Chemical Technology and Environmental Science & Technology.

With a vision of creating a strong research-oriented academic ecosystem, the institution expanded into postgraduate education. M.E. programs in Chemical and Mechanical Engineering were introduced in 2015, followed by postgraduate programs in Chemistry in 2018 and Environmental Management in 2020. This gradual expansion strengthened the institution's academic foundation while establishing closer connections with industries and applied research.

A major milestone was achieved in **2021**, when UPL University of Sustainable Technology was established as a private university under the Gujarat Private Universities Act, 2009, as amended in 2021. The University was empowered to confer degrees under Section 22 of the UGC Act, marking its transition from an engineering institute into a multidisciplinary higher-education institution.

The University subsequently broadened its academic portfolio through Diploma, B.E., M.E., B.Sc., M.Sc., postgraduate diploma and Ph.D. programs. Doctoral education was introduced in Engineering, Science, Mathematics, Physics and English, further strengthening its research culture. The University has also developed interdisciplinary and industry-focused initiatives in sustainability, environmental management, process safety, instrumentation, automation and analytical technologies.

Today, UPL University continues to build its identity around **industry-focused education, research, innovation, sustainability and employability**. Its achievements include NBA-accredited engineering programs, a NABL-accredited environmental laboratory, industry consultancy and a Centre of Excellence in Process Safety offering risk assessment, process-hazard identification, 3D modelling and safety training.

From a single engineering institute established in 2011 to a multidisciplinary university serving engineering, science, technology and sustainability domains, UPL University's journey reflects a continuous commitment to academic excellence, industrial relevance, research and sustainable technological development.

Vision

- To nurture ethically skilled students for better contribution to the industry, business and the upliftment of society.
- To develop knowledgeable and professionally competent engineers to meet global challenges .

Mission

- To provide an environment of academic excellence in Engineering and Technology through complete dedication to all round growth of students and develop sustainable solutions.

Ankleshwar Rotary Education Society

Ankleshwar Rotary Education Society (ARES) is promoted by an International NGO, the Rotary Club of Ankleshwar, and strongly supported by the world-renowned Agrochemical doyen, UPL Ltd., the university is committed to work with a philanthropic approach to impart world class education to students in the fields of Science, Engineering, Technology, and Management. Using research in science and technology for building a sustainable future for all and developing youth power of India through skill development for good employment is the vision of the university. The university moving ahead in this direction with an unassuming support from other industries, such as Sajjan India Ltd., Zydus Cadila, GRP Ltd, BEIL Infrastructure Ltd., Gharda Chemicals, Colourtex Ltd., and many others in Bharuch District. Following are the members of ARES:

Mrs. Sandra R. Shroff, Chairperson, ARES
Mr. Ashok A. Panjwani, President, ARES
Mr. Angiras H. Shukla, Secretary, ARES
Mr. Kishore S. Surti, Treasurer, ARES

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ME



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B.E Sem-5
EST



Krish Patel
B.E Sem-5
CO



Simran Singh
Sem-3
B.Sc Chemistry

Editorial Message

It gives us immense pleasure to present this edition of our college magazine, a reflection of the enthusiasm, creativity, innovation, and achievements that define our vibrant academic community. This magazine is a celebration of the collective efforts of our students, faculty members, researchers, and staff who continue to contribute to the growth and excellence of our institution.

The past year has been marked by remarkable accomplishments and inspiring initiatives. From receiving prestigious recognitions such as the **APO National Award** and the **Best Student Chapter Award** to celebrating our **16th Foundation Day**, our institution has continued to strengthen its commitment to academic excellence, professional development, and social responsibility.

Sustainability and well-being have remained at the forefront of our activities. The celebrations of **World Environment Day**, the **12th International Yoga Day**, and the **Tree Plantation – NSS Activity** reflect our dedication toward environmental conservation and holistic development. The inauguration of the **R&D Center and Center of Excellence for Process Safety** marks a significant milestone in advancing research, innovation, and industry-oriented learning.

Our students have once again demonstrated exceptional talent and determination through their achievements in academics, sports, and extracurricular activities. The **UPL University Cricket Team's Championship Achievement**, the **National Level WDS K1 Championship**, and the **Chess Competition organized by the Sports Club** highlight the spirit of teamwork, discipline, and excellence among our students.

This edition also provides a platform for intellectual and creative expression through **technical articles, literary articles, photography, blog competitions, and the Students' Corner**. These contributions showcase the diverse talents and innovative ideas of our students and encourage a culture of knowledge sharing and creativity.

As we move forward, let us continue to embrace innovation, pursue excellence, and work together to create meaningful contributions to society. I congratulate all contributors and appreciate the efforts of the editorial team in bringing together this wonderful collection of achievements and experiences.

We hope this magazine inspires every reader and serves as a memorable chronicle of our journey, accomplishments, and aspirations.

Happy Reading!

ACHIEVEMENTS & RECOGNITION

APO National Award

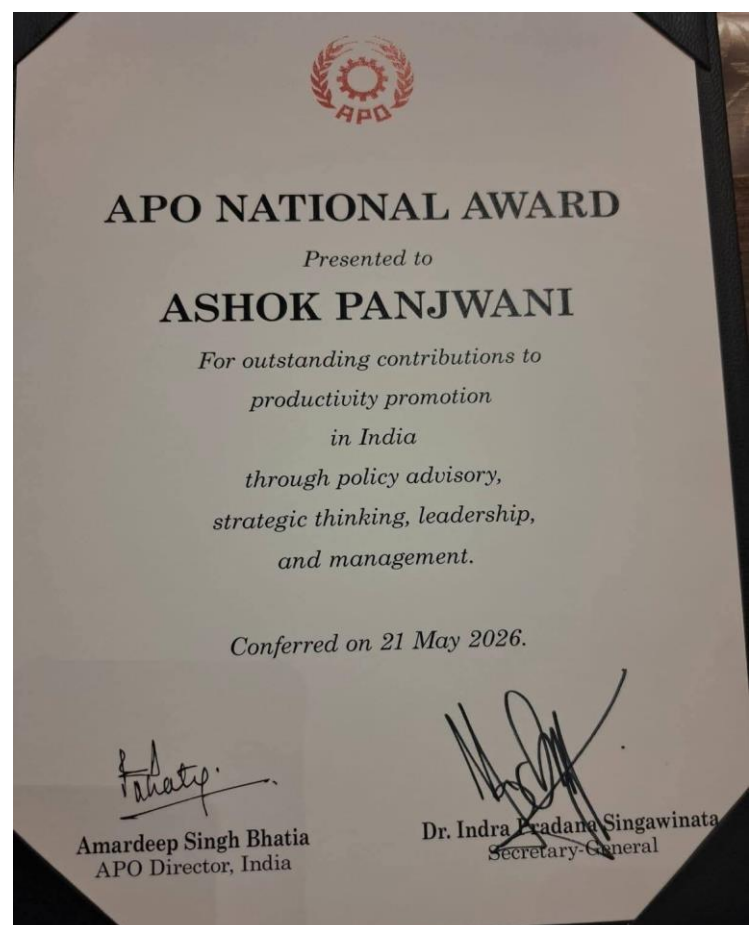


It is a matter of immense pride for all of us that our honourable President Shri. Ashok Panjwani has been conferred with the prestigious Asian Productivity Organization (APO) National Award 2025 under the Productivity Advocates category. He was selected by the APO Award Committee from among several distinguished nominees in recognition of his outstanding advocacy in sustainability, waste management, and productivity enhancement. This prestigious honor reflects his unwavering commitment to promoting excellence and sustainable development through innovative productivity initiatives.

The Asian Productivity Organization (APO) is an intergovernmental organization established in 1961 to enhance productivity and sustainable economic development across the Asia-Pacific region through mutual cooperation, knowledge sharing, and capacity building. Headquartered in Tokyo, Japan, the APO comprises 21 member countries and works closely with governments, industries, and institutions to foster innovation, improve competitiveness, and encourage sustainable growth.

The APO National Award is one of the organization's highest individual recognitions, presented annually to individuals who have made exceptional contributions towards advancing productivity within their organizations and at the national level. Shri Ashok Panjwani has received this distinguished award for his exemplary leadership, strategic vision, and dedication to promoting productivity improvement initiatives. His efforts in policy development, sustainability, and resource optimization have significantly contributed to enhancing organizational efficiency and supporting sustainable national productivity.

This remarkable achievement is a proud moment not only for Shri Ashok Panjwani but also for our entire organization. His recognition on an international platform highlights the impact of his visionary leadership and relentless pursuit of excellence. We extend our heartfelt congratulations to him on this well-deserved honor and wish him continued success in inspiring innovation, productivity, and sustainable development for the benefit of industry and society.





At UPL University of Sustainable Technology, global learning is transformed into excellence in education, research, innovation, and sustainable development. Reinforcing this vision, Dr. Snehal Lokhandwala, Dr. Purvi Naik, Dr. Jalpa Thakkar, Dr. Harshal Patil, Mr. Samik Bhatt, and Mr. Sudeep Wadia represented the University at the prestigious Faculty Training Programme conducted by the University of Oxford, United Kingdom. The programme provided an enriching academic experience, offering valuable insights into the future of higher education through focused discussions on Artificial Intelligence, Sustainability, Climate Action, Innovation, and Oxford's renowned tutorial-based pedagogy.

The programme enabled the faculty members to engage with global best practices in research-led teaching, interactive tutorials, critical thinking, interdisciplinary learning, and innovative pedagogical approaches. Through meaningful interactions with internationally renowned academicians and education leaders, the participants gained valuable perspectives that will further strengthen teaching excellence, research capabilities, innovation, and global academic engagement at UPL University of Sustainable Technology. These learnings will contribute significantly to enhancing the overall quality of education and fostering a future-ready academic environment.

This initiative reflects the Management's unwavering commitment to providing faculty members with international exposure and opportunities to learn from leading institutions across the world. By translating these global experiences into impactful academic practices, the University continues to promote a culture of innovation, sustainability, continuous improvement, and academic excellence. The insights gained from the programmed will inspire curriculum enhancement, interdisciplinary research, and industry-relevant education, ensuring that global knowledge is effectively connected with local action to create meaningful societal impact.

Mr. Jai Shroff, Chairman & Group CEO, UPL Limited, reaffirmed his commitment to strengthening academia–industry partnerships and global collaborations that drive innovation and research excellence. His visionary leadership continues to advance UPL University of Sustainable Technology's mission of delivering world-class education and sustainable impact.



Best Student Chapter Award

We are delighted to share that the IChE SRICT Student Chapter has been honoured with the prestigious Best Student Chapter Award – Ankleshwar Regional Centre for the third consecutive year. This remarkable achievement reflects the chapter's consistent dedication to academic excellence, technical innovation, and active student engagement. Receiving this recognition for three successive years is a testament to the collective efforts and commitment of the students, faculty members, and the University in promoting professional excellence.

The award was presented during the Annual General Meeting held on 05 July 2026 by Shri B. D. Dalwadi, Shri Sandip Parekh, and other esteemed members of the IChE Ankleshwar Regional Centre. On behalf of the chapter, the award was proudly received by the Chemical Engineering faculty members of UPL University of Sustainable Technology.

The recognition acknowledges the chapter's outstanding contribution in organizing technical events, workshops, industrial interactions, seminars, and activities that enrich students' knowledge, leadership skills, and industry readiness.

This achievement highlights the unwavering support of the University Management, the dedication of the faculty, and the enthusiasm of the students in fostering a vibrant technical culture. We extend our heartfelt congratulations to all the students and faculty members who contributed to this remarkable success. Their continued pursuit of excellence has brought immense pride to UPL University of Sustainable Technology, inspiring the chapter to achieve even greater milestones in the years ahead. This recognition further reinforces the University's commitment to nurturing future-ready professionals and promoting excellence in engineering education and innovation, while encouraging a culture of continuous learning, leadership, and professional excellence.



UPL UNIVERSITY
OF
SUSTAINABLE TECHNOLOGY

Proud Achievement

IChE SRICT Student Chapter
Best Student Chapter Award
Ankleshwar Regional Centre

Happy to share this proud milestone for our department.

Third
Consecutive Year

Department of Chemical Engineering
UPL University of Sustainable Technology



Celebrating the 16th Foundation Day of UPL University of Sustainable Technology

On 16th July 2026, the auspicious occasion of the 16th Foundation Day of UPL University of Sustainable Technology, the NSS Club organized a Tree Plantation Programme under the inspiring theme “Ek Ped Maa Ke Naam” (एक पेड़ माँ के नाम). The initiative aimed to promote environmental awareness, encourage sustainable practices, and highlight the importance of nurturing nature as a responsibility towards future generations. The programme reflected the University's commitment to sustainability, environmental conservation, and creating a greener ecosystem within and beyond the campus.

The event witnessed enthusiastic participation from more than 160 students, who actively contributed to the plantation drive by planting around 151 saplings across the campus premises. Each planted sapling represented a promise towards environmental protection and a step toward building a healthier and more sustainable future. Through this initiative, students gained practical exposure to the importance of biodiversity conservation, tree

plantation, and their role as responsible citizens in protecting the environment.

The plantation programme was graced by the presence of the Provost of UPL University of Sustainable Technology, along with the Registrar, Controller of Examinations (COE), Deans, Heads of Departments, faculty members, and staff. Their valuable presence encouraged the students and strengthened the University's vision of integrating sustainability into education and campus activities. The dignitaries appreciated the efforts of the NSS Club and motivated everyone to continue participating in environmental initiatives.

The “Ek Ped Maa Ke Naam” campaign beautifully symbolized the emotional connection between humans and nature, reminding everyone that every tree planted today contributes to a cleaner environment, improved air quality, and a greener planet tomorrow. The event concluded with a renewed commitment from students and faculty members to actively participate in sustainable practices and preserve nature for upcoming generations.

Every tree planted today is a step towards a greener tomorrow, creating a legacy of sustainability, care, and responsibility for generations to come.



Inauguration of R&D Center & Center Excellence for Process Safety



UPL University of Sustainable Technology marked a significant milestone with the successful inauguration of the R&D Centre and the Centre of Excellence for Process Safety. The establishment of these centers reflects the university's commitment to promoting innovation, advanced research, and excellence in process safety. The initiative aims to strengthen the connection between academia and industry while supporting sustainable technological development.

The inauguration ceremony symbolized the beginning of a new era in fostering industry-oriented research, technological innovation, and safe engineering practices. The newly established centers will serve as a platform for students, researchers, and faculty members to collaborate

on cutting-edge research projects, develop practical solutions, and contribute to industrial growth and sustainability.

The university was privileged to welcome Prof. V. N. Rajasekharan Pillai, Former Chairman of the University Grants Commission (UGC), New Delhi, as the Chief Guest. In his inspiring address, he emphasized the importance of research, innovation, and quality education in addressing global challenges. His valuable insights motivated students, faculty members, and industry professionals to pursue impactful research that contributes to sustainable development and societal progress. His thought-provoking interaction inspired the audience to embrace innovation as a catalyst for national and global development.



The event concluded with a renewed commitment to creating knowledge, driving innovation, and promoting excellence in process safety. Through the establishment of these centers, UPL University of Sustainable Technology has taken a significant step towards building safer, smarter, and more sustainable industries while empowering future engineers and researchers. The initiative further strengthens the university's vision of becoming a hub for research excellence and industry collaboration..



ABHYUTHAN-2026

UPL University of Sustainable Technology proudly organized its flagship Academic Excellence Awards Ceremony, "ABHYUTHAN-2026," on 23rd and 29th June 2026 to honour the outstanding academic achievements of students from Diploma, B.E, M.E, B.Sc, and M.Sc. programmes. The event recognized meritorious students from various disciplines for their exceptional performance in the Summer-2026 examinations, reaffirming the University's commitment to academic excellence.

The ceremonies were graced by eminent dignitaries from academia and industry, whose inspiring addresses encouraged students to pursue excellence, innovation, and lifelong learning. The events were held under the esteemed leadership of Mr. Ashok Panjwani, President, UPL University of Sustainable Technology, in the presence of the University's academic leadership, faculty members, staff, parents, and students.

Across both ceremonies, 771 students were felicitated with certificates and cash awards totaling ₹3,30,067. A remarkable 34 students achieved a perfect 10.00 SPI, while 7 students were honored with Gold Medals for their outstanding and consistent academic performance.



ABHYUTHAN-2026 concluded as a proud celebration of dedication, perseverance, and scholastic excellence. The event inspired students to continue striving for higher achievements and reaffirmed the University's vision of nurturing future professionals through excellence in education, fostering a culture of lifelong learning, innovation, and academic leadership. The ceremony also strengthened the spirit of academic commitment and encouraged students to contribute meaningfully to society through knowledge, integrity, and continuous personal and professional development.



Artimedes Club-pixel Palette Competition

The ARTIMEDES Club organized the Pixel Palette Competition 2026 on July 13, 2026, at UPL University of Sustainable Technology. The event saw enthusiastic participation from 49 diploma students showcasing their creative and technical skills across four digital media categories. Following an evaluation by Jury Member Mr. Dhananjay Chauhan (Head of MSH Department & Head of ARTIMEDES Club), the winners were officially announced on July 16, 2026, during the university's 16th Foundation

Day Celebration:

- 🎬 Reel Making: Rana Yug (DE IT - Sem 5)
- 📷 Photography: Tarang Gadhesariya (DE CO - Sem 5)
- 🎥 Videography: Jay Prajapati (DE Chemical –Sem 1)
- 🎨 Digital Poster Design: Keyur Girase (DE Chemical –Sem 3)



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SUBMISSION DATE: 13-7-2026

STUDENT COORDINATORS
KRISHNA BHAGAT 9558178341
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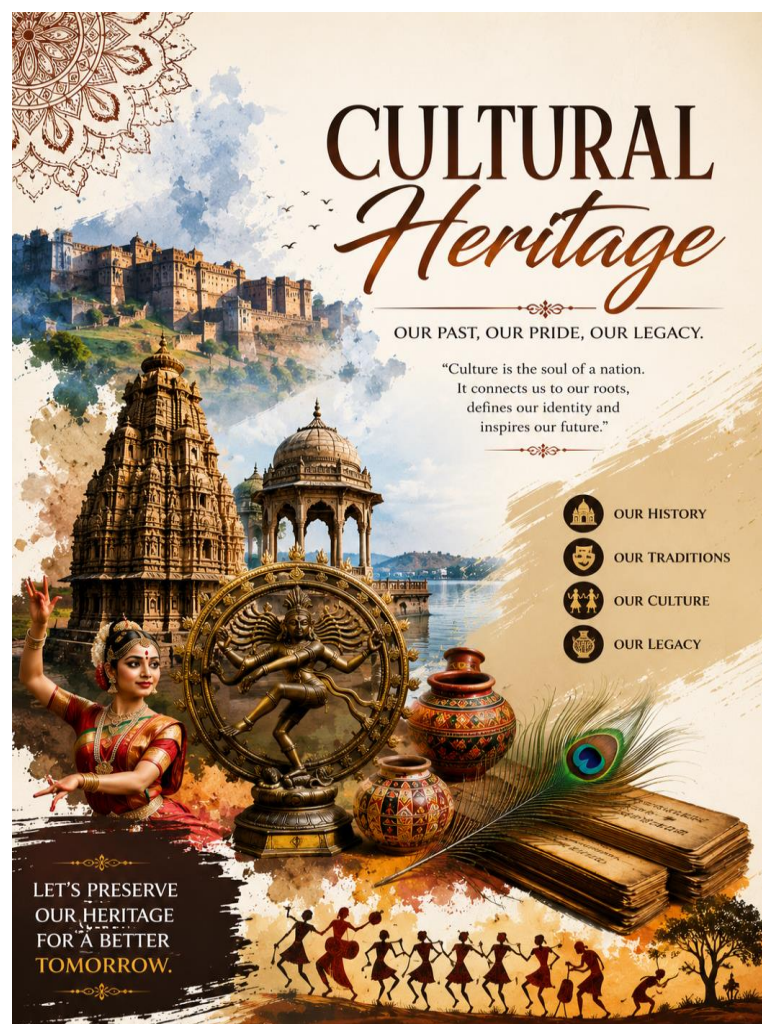
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Abstract

Industry 4.0 is transforming the chemical process industry by integrating digital technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Big Data Analytics, Cloud Computing, and Digital Twin technology into manufacturing processes. These technologies enable real-time monitoring, process optimization, predictive maintenance, and improved decision-making, leading to higher productivity, enhanced safety, better product quality, and reduced operating costs. Although challenges such as cyber-security and implementation costs remain, Industry 4.0 is driving the development of smarter, more efficient, and sustainable chemical manufacturing systems.

Key Technologies

Several important technologies make Industry 4.0 possible in chemical industries

Introduction

Over the years, the industrial world has gone through several major changes, each one bringing new technologies that made work faster, easier, and more efficient. Today, we are living in what is called the Fourth Industrial Revolution, or Industry 4.0. This phase is all about blending digital technologies with traditional manufacturing to create smarter and more connected systems. In chemical process industries, this shift is helping transform conventional plants into intelligent, automated, and highly efficient operations.

Industry 4.0 brings together technologies like Artificial Intelligence (AI), the Internet of Things (IoT), Big Data Analytics, Cloud Computing, and Digital Twin technology. These tools allow chemical plants to run more smoothly, improve safety, cut down costs, and produce better-quality products. By connecting machines, sensors, and control systems, plants can now communicate in real time and make quick decisions, making the entire process more flexible and responsive.

What is Industry 4.0?

In simple terms, Industry 4.0 means using digital technologies to make industrial processes smarter.

Unlike older systems where machines followed fixed instructions, modern systems can collect data, analyze it, and respond instantly.

This means machines can make decisions on their own without needing constant human supervision.

In chemical plants, sensors are placed throughout the system to monitor important factors like temperature, pressure, flow rate, liquid levels, and chemical composition. These sensors continuously send data to control systems, which then adjust operations as needed. For example, if a reactor starts getting too hot, the system can automatically activate cooling or alert operators before it becomes dangerous.

This kind of smart automation not only improves efficiency but also reduces human error and makes plant operations safer and more reliable.

Internet of Things (IoT)

The Internet of Things connects different pieces of equipment using sensors and communication networks. In a chemical plant, devices like pumps, valves, reactors, and storage tanks can all send real-time data to a central system. This constant flow of information helps engineers keep an eye on everything happening in the plant. For example, if a pump starts vibrating unusually, it could be an early sign of failure. Detecting such issues early helps avoid breakdowns and saves maintenance costs.

Artificial Intelligence (AI)

Artificial Intelligence helps process and analyze the huge amount of data generated in chemical plants. AI systems can recognize patterns, predict problems, and suggest improvements.

In practice, AI can help optimize production, reduce waste, and maintain consistent product quality. It can also guide engineers by recommending the best operating conditions based on past and current data.

Big Data Analytics

Chemical plants produce massive amounts of data every

second. Big Data Analytics helps make sense of this information by identifying trends and patterns.

Engineers can use these insights to improve plant performance, reduce downtime, and make better decisions about maintenance and production planning.

Cloud Computing

Cloud Computing allows data to be stored securely on remote servers, making it accessible from anywhere. This means engineers and managers can monitor plant operations even when they are not physically present.

Digital Twin

A Digital Twin is like a virtual copy of a real chemical plant or process. It receives real-time data from the actual system and allows engineers to test different scenarios.

Before making changes in the real plant, engineers can try them out on the digital twin to see how they will affect safety, efficiency, and cost. This helps reduce risks and improves decision-making without interrupting production.

Inventory systems track raw materials and finished products, helping manage resources better and reduce waste.

Benefits

Adopting Industry 4.0 brings several advantages to chemical industries:

- Increased productivity due to optimized operations and less downtime
- Better product quality through precise monitoring and control
- Improved safety with real-time alerts and automated systems
- Lower energy use and reduced operating costs
- Reduced environmental impact through efficient use of resources

These benefits make Industry 4.0 an important step forward for modern chemical manufacturing.

Challenges

Even though Industry 4.0 offers many benefits, it also comes with challenges. One major issue is the high initial cost of setting up advanced equipment, sensors, and digital systems.

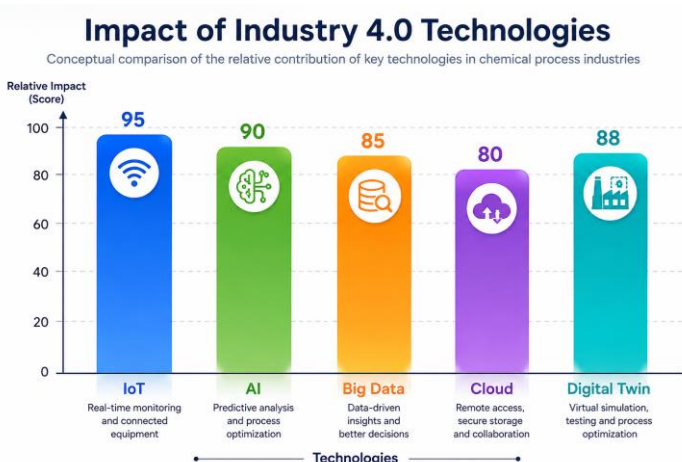
Cybersecurity is another concern, as connected systems can be vulnerable to cyberattacks. Protecting sensitive data and ensuring secure communication is very important.

There is also a growing need for skilled professionals who understand both chemical engineering and digital technologies. Proper training and education are essential to prepare engineers for this new way of working.

Role of Chemical Engineers

Chemical engineers play a crucial role in bringing Industry 4.0 into practice. They combine their knowledge of chemical processes with modern digital tools to design and manage smart systems.

They are responsible for integrating sensors, automation, and data analysis into plant operations. They also use simulation tools and digital twins to improve efficiency and safety. In addition to traditional skills, chemical engineers



Applications

Industry 4.0 is being used in many ways in chemical process industries. One of the most common uses is smart monitoring, where sensors continuously track process conditions and provide real-time updates. This helps keep operations stable and efficient.

Automated control systems adjust operating conditions automatically, reducing the need for manual intervention. Predictive maintenance is another important application, where systems predict equipment failures before they happen. This allows maintenance to be planned in advance, reducing downtime and repair costs. Quality control has also improved, as online analyzers constantly check product composition and allow quick adjustments.

now need to learn data analysis, programming, automation, and AI. This combination will help them stay relevant in the evolving industry.

Future

The future of chemical industries is moving toward fully automated and intelligent systems. Smart factories will operate with minimal human intervention while maintaining high efficiency and safety.

AI will play a bigger role in decision-making, and robots may handle dangerous or repetitive tasks. Digital twins will become even more advanced, allowing real-time optimization of entire plants.

Rather than replacing engineers, these technologies will support them, allowing them to focus more on innovation and strategic thinking.

Conclusion

Industry 4.0 is changing chemical process industries by making them smarter, more connected, and more efficient.

Technologies like AI, IoT, Big Data Analytics, Cloud Computing, and Digital Twin are transforming how chemical plants operate.

By improving productivity, safety, and sustainability, Industry 4.0 is shaping the future of chemical engineering. For students and professionals, understanding these technologies is essential to keep up with the rapidly changing industrial world. Industry 4.0 is not just a trend—it is the future of chemical manufacturing



Mr. Dhruv A. Patel
Chemical Engineering department

Importance of C–H Bond Functionalization in Organic Chemistry over Traditional Cross-Coupling Reactions

Abstract

C–H bond functionalization is a modern synthetic strategy that enables the direct transformation of C–H bonds into valuable carbon–carbon and carbon–heteroatom bonds, avoiding the need for pre-functionalized substrates used in traditional cross-coupling reactions. This approach improves step economy, reduces waste generation, and enhances sustainability in organic synthesis. Its ability to perform late-stage functionalization has made it highly useful in pharmaceutical, agrochemical, and materials chemistry. Despite challenges in selectivity and catalyst development, advances in transition-metal and sustainable catalytic systems continue to establish C–H activation as an important tool for efficient and green chemical synthesis.

Keywords: C–H Bond Functionalization, C–H Activation, Cross-Coupling Reactions, Green Chemistry, Transition-Metal Catalysis, Sustainable Synthesis.

The selective construction of carbon–carbon (C–C) and carbon–heteroatom (C–X) bonds is one of the fundamental objectives in organic synthesis. For several decades, transition-metal-catalyzed cross-coupling reactions such as the Suzuki–Miyaura, Heck, Sonogashira, Stille, Negishi, and Kumada reactions have served as indispensable tools for assembling structurally complex organic molecules. These methodologies have transformed synthetic chemistry and have had a profound impact on the pharmaceutical, agrochemical, and materials industries. The significance of these reactions was recognized with the awarding of the 2010 Nobel Prize in Chemistry to Richard F. Heck, Ei-ichi Negishi, and Akira Suzuki. Despite their remarkable success, conventional cross-coupling reactions generally require pre-functionalized substrates, such as aryl halides, pseudohalides, or organometallic reagents, which often necessitate additional synthetic steps for substrate preparation. The need for substrate pre-activation not only.

increases the overall reaction sequence but also reduces atom economy, generates stoichiometric quantities of waste, and raises the cost of synthesis. Consequently, there has been a growing demand for more direct, efficient, and sustainable synthetic methodologies capable of minimizing unnecessary functional group manipulations.

C–H bond functionalization has emerged as one of the most revolutionary strategies in modern organic chemistry because it enables the direct transformation of ubiquitous carbon–hydrogen bonds into valuable carbon–carbon or carbon–heteroatom bonds without requiring prior functionalization of the substrate. Since C–H bonds are among the most abundant bonds in organic molecules, their direct activation offers an attractive alternative to traditional synthetic approaches. Unlike classical cross-coupling reactions that require halogenation or organometallic derivatization before bond formation, C–H functionalization utilizes the inherent C–H bond itself as the reaction site. This conceptual shift has dramatically simplified synthetic routes and has established C–H activation as a cornerstone of modern sustainable synthesis. One of the most significant advantages of C–H bond functionalization is its exceptional step economy. Traditional cross-coupling methodologies generally involve multiple synthetic operations, beginning with the preparation of halogenated or organometallic coupling partners followed by purification and the subsequent coupling reaction. Each additional synthetic step increases solvent consumption, purification requirements, production time, operational costs, and cumulative yield losses. In contrast, direct C–H functionalization bypasses these preliminary transformations by activating the target C–H bond directly within the parent molecule. Consequently, the total number of synthetic operations is significantly reduced, leading to shorter reaction sequences and higher overall synthetic efficiency.

This reduction in synthetic complexity is particularly advantageous in both academic research and industrial manufacturing, where minimizing process steps directly translates into lower production costs and improved

scalability.

Another major advantage of C–H functionalization is its superior atom economy, one of the key principles of green chemistry. In conventional cross-coupling reactions, a substantial portion of the starting materials is discarded as by-products. For example, Suzuki–Miyaura coupling produces boron-containing waste, Stille coupling generates toxic organotin residues, and Negishi or Kumada reactions produce inorganic metal salts. Furthermore, the halogen atom originally attached to the substrate is ultimately removed as waste during the coupling process. These stoichiometric by-products decrease resource utilization and increase environmental burden. In contrast, direct C–H functionalization transforms an existing C–H bond into a new chemical bond without requiring a leaving group, thereby incorporating a greater proportion of the starting materials into the desired product.

The environmental benefits of C–H bond functionalization further distinguish it from traditional cross-coupling methodologies. Conventional coupling reactions frequently rely on expensive palladium catalysts, phosphine ligands, organometallic reagents, and large quantities of inorganic bases or oxidants, many of which pose environmental and safety concerns. Additionally, the synthesis of halogenated substrates often requires hazardous halogenating reagents that generate environmentally undesirable by-products. Direct C–H functionalization minimizes many of these drawbacks by eliminating the need for substrate pre-functionalization and reducing the overall consumption of chemicals, solvents, and purification materials. Recent developments employing earth-abundant transition metals such as iron, cobalt, nickel, copper, and manganese have further enhanced the sustainability of C–H activation processes by replacing expensive noble-metal catalysts with more economical and environmentally benign alternatives.

An equally important feature of C–H functionalization is its ability to enable late-stage functionalization of structurally complex molecules. Many pharmaceuticals, natural products, and biologically active compounds possess

multiple functional groups and highly elaborate molecular architectures. Traditional synthetic methods often require complete redesign of synthetic pathways to introduce small structural modifications. In contrast, C–H activation allows selective modification of complex molecules at a late stage of synthesis without disturbing existing functional groups.

This capability has become particularly valuable in medicinal chemistry, where rapid preparation of structural analogues is essential for structure–activity relationship (SAR) studies and lead optimization. Direct C–H functionalization enables chemists to diversify existing drug candidates efficiently, thereby accelerating drug discovery and reducing the time required for analogue synthesis.

The broad functional group tolerance exhibited by modern C–H functionalization methodologies has also contributed significantly to their widespread adoption. Numerous catalytic systems can accommodate alcohols, amines, amides, esters, ketones, aldehydes, nitriles, ethers, halides, and heterocyclic frameworks without compromising reaction efficiency. Such versatility permits selective transformations in highly functionalized molecules, which are often difficult to achieve using conventional cross-coupling reactions. Moreover, the development of directing-group-assisted and directing-group-free strategies has greatly expanded the scope of regioselective C–H activation, allowing selective functionalization at *ortho*-, *meta*-, and *para*-positions in aromatic compounds as well as at previously inaccessible aliphatic C (sp³)–H bonds.

The impact of C–H bond functionalization extends far beyond pharmaceutical chemistry. In natural product synthesis, direct C–H activation has enabled significant reductions in synthetic step count by facilitating selective oxidation, alkylation, arylation, amination, and carbonylation reactions during the final stages of synthesis. In materials science, direct arylation polymerization has emerged as an attractive alternative to conventional Stille polymerization for the preparation of conjugated polymers used in organic electronics.

Because direct arylation eliminates the need for organotin reagents, it offers substantial environmental and economic advantages while simplifying polymer synthesis. Similarly, C–H activation has become increasingly important in the synthesis of metal–organic frameworks (MOFs), covalent organic frameworks (COFs), liquid crystals, organic semiconductors, and advanced functional materials.

The rapid evolution of transition-metal catalysis has been instrumental in advancing C–H functionalization methodologies. Catalysts based on palladium, rhodium, ruthenium, iridium, cobalt, nickel, copper, iron, manganese, and chromium have enabled a diverse range of transformations, including arylation, alkylation, alkenylation, alkynylation, carbonylation, amination, oxygenation, borylation, and halogenation.

More recently, the combination of transition-metal catalysis with photoredox catalysis, electrochemistry, organocatalysis, and photocatalytic hydrogen atom transfer has further expanded the scope and selectivity of C–H activation. These synergistic catalytic approaches have opened new opportunities for performing reactions under milder conditions while improving functional group compatibility and reducing energy consumption.

Despite the tremendous progress achieved over the past two decades, several challenges remain in the field of C–H bond functionalization. Achieving high levels of site selectivity among multiple chemically similar C–H bonds continues to be a major challenge, particularly in complex molecules lacking directing groups. The selective activation of unactivated aliphatic C (sp³)–H bonds, asymmetric C–H functionalization, catalyst recyclability, and the development of directing-group-free protocols remain active areas of research. Furthermore, replacing precious metal catalysts with inexpensive and earth-abundant metals while maintaining high catalytic efficiency continues to attract considerable attention. Addressing these challenges will undoubtedly broaden the applicability of C–H activation in both laboratory-scale synthesis and industrial manufacturing.

In conclusion, C–H bond functionalization represents one of the most significant paradigm shifts in contemporary organic chemistry. By directly converting inert C–H bonds into valuable carbon–carbon and carbon–heteroatom bonds, it overcomes many of the inherent limitations associated with traditional cross-coupling reactions, including the requirement for pre-functionalized substrates, poor atom economy, multistep synthetic sequences, and excessive waste generation. The remarkable improvements in synthetic efficiency, sustainability, functional group tolerance, and late-stage molecular diversification have established C–H activation as a powerful and versatile strategy for the synthesis of pharmaceuticals,

agrochemicals, natural products, and advanced functional materials. With continuous advances in catalyst design, mechanistic understanding, photochemistry, electrochemistry, and computational chemistry, C–H bond functionalization is expected to play an increasingly central role in shaping the future of green, efficient, and sustainable organic synthesis.



Dr. Monak Patel
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Hydrogen Economy: Opportunities for Chemical Engineers

"Hydrogen is not just another fuel—it is a pathway to a cleaner and sustainable future."

Abstract

The hydrogen economy is a promising approach for achieving a cleaner and sustainable energy future by reducing carbon emissions and dependence on fossil fuels. Hydrogen produced through clean technologies, especially green hydrogen, has applications in industries, transportation, and power generation. Chemical engineers play an important role in hydrogen production, process design, storage, and safety improvement. Despite challenges such as cost, storage, and infrastructure limitations, advancements in hydrogen technologies provide significant opportunities for sustainable energy development.

Keywords: Hydrogen Economy, Green Hydrogen, Chemical Engineering, Renewable Energy, Hydrogen Production, Sustainable Energy.

As the world focuses on reducing carbon emissions, hydrogen has become an important clean energy source. Known as the "**fuel of the future**," hydrogen can be used for electricity generation, transportation, and industrial processes with minimal pollution when produced using clean methods.

The **Hydrogen Economy** refers to a system where hydrogen is widely used as a primary energy source. Many countries are investing in hydrogen technologies to reduce dependence on fossil fuels. This shift creates significant opportunities for chemical engineers.

What is Hydrogen?

Hydrogen is the lightest and most abundant element. On Earth, it is mostly found combined with other elements like oxygen in water. To use hydrogen as fuel, it must be separated through different processes.

Hydrogen has high energy content and produces only water when used in fuel cells, making it an environmentally friendly energy option.

Types of Hydrogen

Hydrogen is classified based on its production method:

- **Grey Hydrogen:** Produced from natural gas; releases carbon dioxide.
- **Blue Hydrogen:** Similar to grey hydrogen but uses carbon capture to reduce emissions.
- **Green Hydrogen:** Produced using renewable energy through electrolysis; it is the cleanest and most sustainable form.

Green hydrogen is considered the future of clean energy.

Applications of Hydrogen

Hydrogen is used in many sectors:

- **Chemical Industry:** Used in ammonia production, refining, and chemical synthesis.
- **Transportation:** Fuel cell vehicles like buses, trucks, and trains.
- **Power Generation:** Used in fuel cells to produce electricity and store renewable energy.
- **Industries:** Steel and cement industries can use hydrogen to reduce emissions.

Role of Chemical Engineers

Chemical engineers play a key role in the hydrogen economy. They design processes for hydrogen production, purification, storage, and transportation.

They work on:

- Reactor design and process optimization
- Catalyst development
- Separation and purification techniques
- Process safety and plant design

Software tools like **Aspen Plus** and **HYSYS** help engineers simulate and optimize hydrogen processes.

Challenges

Despite its benefits, hydrogen faces challenges:

- **High Cost:** Green hydrogen production is expensive.
- **Storage Issues:** Hydrogen requires high pressure or low temperature storage.
- **Infrastructure:** Limited pipelines and fueling stations.



Mr.Dev Dandiwalwa
Department: BE – CE Sem: 7

Green hydrogen and industrial electrification are key technologies for India's clean energy transition. They help reduce carbon emissions, improve energy efficiency, and create opportunities in renewable energy and advanced engineering fields. Despite challenges such as cost and infrastructure, these technologies have strong potential for sustainable industrial growth.

Keywords: Green Hydrogen, Industrial Electrification, Renewable Energy, Clean Energy.

Introduction

India is rapidly moving towards a cleaner and more sustainable energy future. Green hydrogen and industrial electrification are two important technologies that can support this transition. Green hydrogen is produced by splitting water into 'hydrogen' and 'oxygen' using electricity generated from renewable sources such as solar and wind energy. Since its production does not directly release carbon emissions, it is considered a clean fuel for the future.

Importance and Emerging Opportunities

Industrial electrification refers to replacing fossil-fuel-based systems with efficient electrical technologies. It can reduce the use of coal, oil, and natural gas in industries such as steel, chemicals, fertilizers, refineries, and transportation. Green hydrogen is especially useful in sectors where direct electrification is difficult. These technologies are creating new opportunities for electrical engineers in renewable energy systems, power electronics, electrolyzers, energy storage, high-voltage engineering, grid management, and industrial automation. For India, they can help reduce carbon emissions, improve energy security, and reduce dependence on imported fossil fuels.

Current Challenges

Despite their potential, some challenges are still there, such as,

- **High cost:** Producing green hydrogen is still expensive compared to traditional hydrogen.
- **Need for large renewable power:** A large amount of solar and wind energy is required for hydrogen production.
- **Lack of advance infrastructure:** India is still developing the pipelines, storage systems, refuelling stations, and other facilities needed for hydrogen.
- **Grid challenges:** Connecting large renewable-energy projects to the existing power grid can sometimes be difficult.
- **Lack of skilled professionals:** More trained engineers and technicians are needed to work in this developing field.
- **Need for further research:** New technologies are required to reduce costs and improve the efficiency of hydrogen production.
- **Energy storage limitations:** Efficient and cost-effective storage of renewable energy and hydrogen remains a major technical challenge.
- **Safety and handling concerns:** Hydrogen is highly flammable and requires strict safety measures during production, transportation, and storage.
- **Policy and regulatory challenges:** Clear standards, supportive regulations, and consistent government policies are needed to encourage large-scale adoption of green hydrogen and industrial electrification.

Conclusion

The integration of digital technologies, smart grids, and energy management systems will improve the efficiency and reliability of clean-energy applications. Continuous research and technological advancements will make green hydrogen more affordable and accessible for large-scale industrial use. Together, these developments will contribute significantly to economic growth, environmental protection, and long-term sustainable development.

Pathan Shahidkhan Usmankhan
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Sustainability as the Key World Environment Day



On the occasion of World Environment Day 2026, the Mission LiFE, Nature Club, and the Department of Environmental Science & Technology, UPL University of Sustainable Technology (UUST), in collaboration with the Forest Department, Valia Range, and in association with the IEI Students' Chapter and Internal Quality Assurance Cell (IQAC), organized a Tree Plantation Programme on the university campus. The event aimed to promote environmental awareness, encourage sustainable living, and inspire collective action towards preserving nature. It reflected the university's commitment to fostering environmental responsibility among students and the wider community.

The Programme was graced by officials from the Forest Department, Valia Range, UUST office bearers, Heads of Departments, faculty members, administrative staff, and enthusiastic students. Their active participation highlighted the importance of collaborative efforts in protecting the environment. The gathering served as a platform to emphasize the significance of afforestation, biodiversity conservation, and climate action while encouraging participants to adopt environmentally responsible practices in their daily lives.

As part of the plantation drive, participants planted a variety of indigenous and eco-friendly saplings across the campus. The activity symbolized a shared commitment to

increasing green cover, improving ecological balance, and creating a cleaner and healthier environment for future generations. Forest Department officials also shared valuable guidance on the proper planting and maintenance of trees, motivating students to care for the saplings and contribute to long-term environmental sustainability.

The programme concluded with a collective pledge to protect the environment and promote sustainable practices in everyday life. Through this meaningful initiative, UPL University of Sustainable Technology reaffirmed its commitment to building a greener campus and contributing to a cleaner, greener, and more sustainable future.



“The Earth is not an inheritance from our ancestors; it is a trust borrowed from future generations.” This simple yet powerful idea reminds us that we all share a responsibility to care for our planet. Today, the world is facing serious environmental challenges like climate change, pollution, and the overuse of natural resources. In times like these, universities have an important role to play in guiding young minds toward a more sustainable way of living.

A university is much more than just a place to attend classes and earn a degree. It is where students grow, explore new ideas, and shape their values. The habits and attitudes developed during these years often stay with them for life. That’s why creating a green campus is not just about planting trees or reducing waste—it’s about encouraging a mindset that respects and protects the environment. A sustainable campus helps students become thoughtful individuals who can make a positive difference in the world.

Understanding a Green Campus

A green campus is one that actively works to protect the environment through everyday practices. It focuses on using resources wisely and reducing harm to nature while creating a healthy and comfortable space for students and staff. This includes saving energy, managing water carefully, reducing waste, and using renewable sources like solar power.

Importance of Sustainability

Environmental problems are growing quickly due to rapid industrial growth and excessive consumption. Rising temperatures, water shortages, and pollution are affecting people across the globe. Universities have a responsibility to prepare students to face these challenges. By teaching sustainable practices and encouraging responsible behaviour, they help build a generation that can create solutions for a better future.

Waste and Resource Management

Managing waste properly is one of the easiest ways to make a campus greener. Separating waste into biodegradable and recyclable categories helps reduce

pollution and makes recycling more effective. Food waste can be turned into compost, and materials like paper and plastic can be reused instead of being thrown away. Awareness programs can motivate students to adopt these habits in their daily lives.

Water conservation is just as important. Small actions like fixing leaking taps, using water-saving fixtures, and collecting rainwater can make a big difference. Students can also help by being mindful of how much water they use and avoiding unnecessary wastage.

Energy and Green Spaces

Saving energy through LED lighting, energy-efficient appliances, and solar power helps reduce electricity consumption and protect the environment. Green spaces, along with active student participation in environmental initiatives and the use of smart technologies, create a sustainable, eco-friendly campus while promoting responsible use of natural resources.

Conclusion

A green campus is a reflection of a community that cares about its future. Even small actions like turning off lights, reducing waste, or saving water can lead to big changes when practiced by many people. Universities have the power to inspire these changes by shaping responsible and aware individuals. By choosing sustainable practices today, we can create a cleaner, healthier, and greener world for generations to come.



Name: Yaksh Doshi
Department: D.E CE

12th International Yoga Day

UPL University of Sustainable Technology celebrated the 12th International Yoga Day on 20th June 2026 with great enthusiasm under the theme "Yoga for Healthy Aging." The event was organized to promote the importance of yoga in maintaining physical fitness, mental well-being, and a balanced lifestyle. It encouraged participants to adopt yoga as a daily practice for leading healthier and more mindful lives.

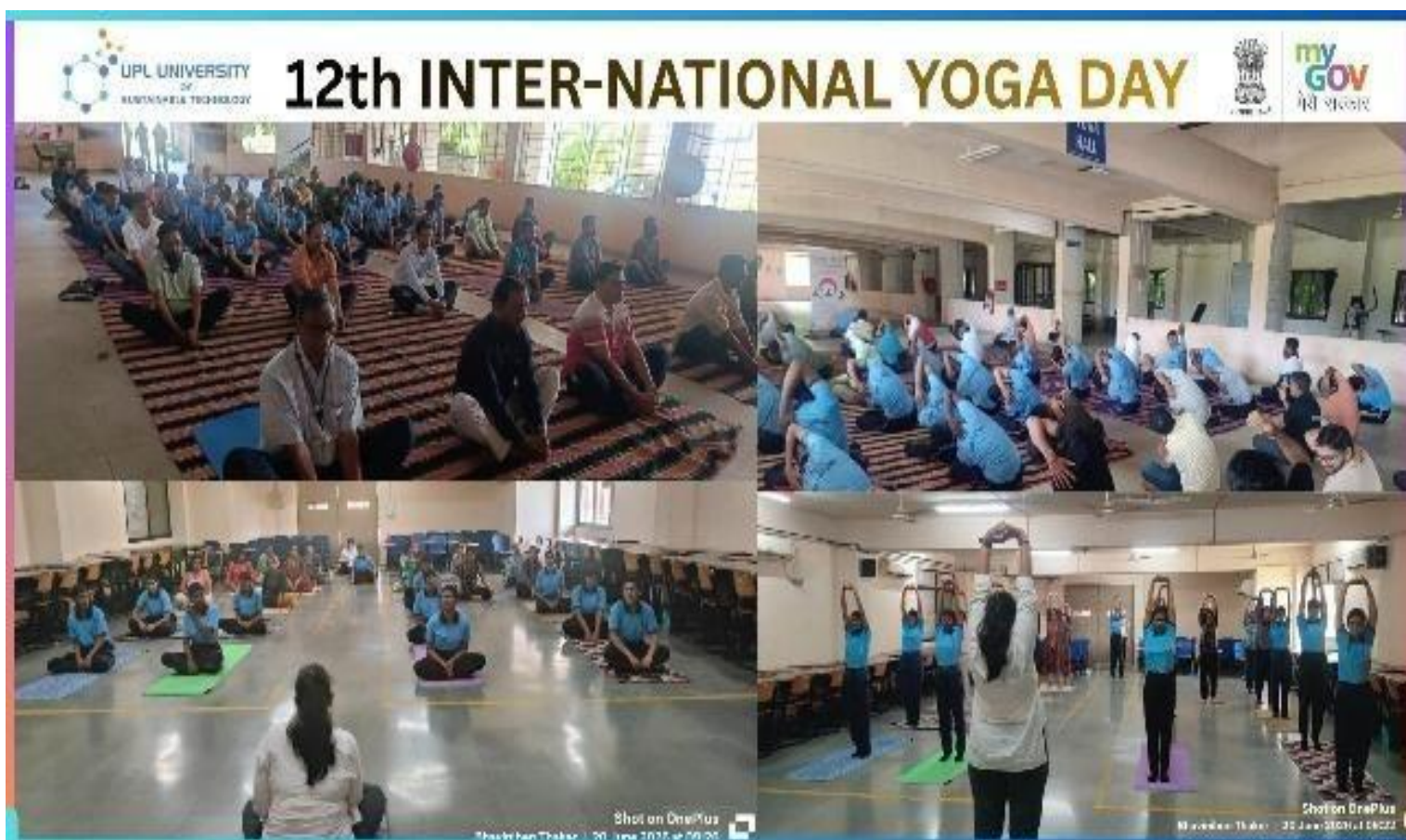
The yoga session for the female staff was conducted by Ms. Bhavini Thaker, Yoga Coach from the Gujarat State Yoga Board (GSYB), while the session for the male staff was led by Mr. Parasmal Jain, Sports and Cultural Coordinator. Both instructors guided the participants through various yoga practices with dedication and expertise.

The celebration witnessed the gracious presence of the Provost, Registrar, Deans, Heads of Departments, faculty members, staff members, and NCC cadets. Their enthusiastic participation reflected the university's commitment to promoting wellness and fostering a healthy

work environment through collective engagement in yoga.

The programme commenced with a prayer, followed by warm-up exercises, yoga asanas, pranayama, meditation, and Yoga Nidra. The session concluded with Omkar Pranayama, leaving participants feeling refreshed, rejuvenated, and mentally relaxed. The well-structured activities provided an opportunity to experience the holistic benefits of yoga. Participants actively engaged in every activity, creating an atmosphere of positivity, discipline, and mindfulness throughout the session.

The celebration concluded on a positive note, inspiring participants to incorporate yoga into their daily routines for lifelong health and well-being. The event successfully reinforced the significance of yoga in enhancing physical fitness, reducing stress, and promoting harmony of mind, body, and spirit. The programme reflected the university's continued commitment to promoting holistic wellness and a healthy lifestyle among its academic community, while encouraging the practice of yoga for overall well-being.



SPORTS & CULTURAL ACTIVITIES

Champions of the PP Savani Open Cricket Championship 2026

UPL University of Sustainable Technology proudly celebrates a remarkable sporting milestone as its Cricket Team emerged victorious in the PP Savani Open Cricket Championship 2026, held on 24th April 2026. The championship witnessed enthusiastic participation from several talented teams, making the competition highly challenging and competitive. Displaying exceptional cricketing skills, unwavering determination, and exemplary sportsmanship, the UPL University team delivered outstanding performances throughout the tournament to secure the coveted championship title.

The team's success was a result of disciplined preparation, strategic planning, and remarkable coordination on the field. Every player contributed significantly with outstanding batting, bowling, fielding, and teamwork, reflecting their dedication and commitment to excellence. Their collective efforts enabled the team to overcome tough opponents and emerge as deserving champions. Team Members are:

- Arya Patel – B.E. Chemical Engineering
- Yash Patel – B.E. Chemical Engineering
- Yuval Patel – B.E. Chemical Engineering
- Gartik Gohil – B.E. Chemical Engineering
- Devanshu Patel – Diploma Chemical Engineering
- Meet Patel – Diploma Chemical Engineering
- Dholu Patel – Diploma Chemical Engineering
- Kuldipsinh Kher – Diploma Chemical Engineering
- Pruthvirajsinh – Diploma Chemical Engineering
- Aniket Vasava – Diploma Chemical Engineering
- Meet Patel – B.Sc. Microbiology
- Krish Patel – B.E. Computer Engineering

The guidance and encouragement provided by the coaches, faculty members, and University administration played a significant role in motivating the players to perform at their highest potential.

The championship victory highlights UPL University's strong commitment to promoting sports and physical fitness as an integral part of holistic education. The University firmly believes that participation in sports nurtures qualities such as leadership, teamwork, time management, confidence, discipline, and the ability to perform under pressure—attributes that are equally valuable in academic and professional life.

The entire UPL University family applauds the champions for their extraordinary performance and wishes them continued success in future intercollegiate, state-level, and national sporting competitions. Their achievement will remain a source of inspiration for future generations of students, motivating them to pursue excellence with commitment, integrity, and unwavering team spirit. This outstanding accomplishment reflects the University's unwavering commitment to fostering excellence in sports and holistic student development. May this memorable victory inspire many more students to embrace the values of dedication, discipline, and teamwork while striving for success in every sphere of life.



Golden Glory at the WAKO Gujarat State Level Kickboxing Championship 2026

UPL University of Sustainable Technology proudly congratulates **Mr. Yash Mane**, a **Second-Year Diploma Computer Engineering** student, on his outstanding achievement at the **WAKO Gujarat State Level Kickboxing Championship 2026**, held on **19th April 2026** at **Sama Sports Complex, Vadodara**. Through exceptional skill, determination, and sportsmanship, he delivered an impressive performance and secured the **Gold Medal**, bringing immense pride and honor to the University. His remarkable victory is a testament to his dedication, disciplined training, and unwavering commitment to excellence.

Winning the state-level championship against talented competitors reflects Yash's perseverance, confidence, and competitive spirit. His achievement exemplifies the importance of hard work, resilience, and continuous

self-improvement. It also highlights the University's commitment to encouraging students to excel not only in academics but also in sports and extracurricular activities, fostering their overall personality and leadership qualities.

The entire UPL University family, along with the Management, faculty members, staff, and fellow students, extends its heartfelt congratulations to Yash Mane on this remarkable accomplishment. His success serves as an inspiration for aspiring sports persons across the campus and reinforces the values of dedication, discipline, and determination. The University wishes him every success in the upcoming National Championship and is confident that he will continue to consistently bring laurels to the institution. May his achievement inspire more students to pursue excellence in sports with passion, perseverance, and determination.



National Level WDS K1 Championship



UPL University of Sustainable Technology takes immense pride in congratulating Mr. Yash Mane, a Semester 4 Diploma Computer Engineering student, for his remarkable achievement of winning the Gold Medal at the prestigious Warrior Dream Series (WDS) K1 National Championship, held in Mumbai. Representing the State of Gujarat, Yash displayed exceptional courage, determination, and sportsmanship throughout the championship. Competing against some of the country's most talented kickboxers, he showcased outstanding technical skills, mental strength, and unwavering confidence to emerge as the national champion in the K1 category. His remarkable victory has brought immense pride and recognition to the University, his family, and the entire state of Gujarat.

The Warrior Dream Series (WDS) is one of India's premier national-level martial arts competitions, attracting elite athletes from across the country. The championship provides a highly competitive platform where participants demonstrate not only their physical abilities but also their discipline, resilience, and strategic thinking. Throughout the tournament, Yash consistently delivered exceptional performances, overcoming every challenge with remarkable composure and determination. His rigorous training, tireless practice, and relentless pursuit of excellence enabled him to perform at the highest level and secure the coveted gold medal. His success is a reflection of countless hours of preparation, sacrifice, and dedication to the sport, making him a role model for aspiring athletes and young students alike.

Yash's achievement is a shining example of the values of perseverance, discipline, and commitment that define true sportsmanship. His journey to the national podium demonstrates that success is achieved through consistent effort, self-belief, and an unwavering determination to overcome obstacles. By competing against the nation's finest athletes and emerging victorious, he has set a benchmark for excellence and inspired young sportspersons to pursue their dreams with confidence and passion. His accomplishment serves as a powerful reminder that dedication and hard work can transform aspirations into extraordinary achievements.

UPL University of Sustainable Technology has always believed in nurturing the overall development of its students by encouraging excellence in academics, sports, research, innovation, and extracurricular activities. The University provides an environment that motivates students to explore their talents beyond the classroom and develop leadership, confidence, teamwork, and resilience. Yash's national-level success reflects this vision and reinforces the University's commitment to creating opportunities for students to excel at state, national, and international platforms. His victory adds another glorious chapter to the University's growing legacy of sporting achievements.

The entire UPL University family, including the Management, faculty members, staff, and fellow students, extends its heartfelt congratulations to Yash Mane on this exceptional accomplishment. His outstanding performance has not only brought laurels to the institution but has also become a source of inspiration for aspiring athletes across the campus. The University wishes him continued success in his future championships and is confident that he will continue to scale greater heights while proudly representing the University and the State of Gujarat. His remarkable journey stands as a testament to the power of dedication, perseverance, and excellence, inspiring future generations of students to dream big, work hard, and achieve success in every sphere of life.

खेल- Club Chess Competition

The खेल Club of the Department of Chemistry, SRICT – Institute of Science & Research, UPL University of Sustainable Technology, successfully organized a Chess Competition on 22nd July 2026 from 1:30 PM to 2:30 PM at the Physics Laboratory. The event aimed to promote strategic thinking, logical reasoning, concentration, and sportsmanship among students while providing an engaging platform to develop their intellectual and analytical abilities beyond the classroom. The competition encouraged participants to apply critical thinking and decision-making skills in a challenging yet enjoyable environment.

The competition witnessed enthusiastic participation from 26 students, who demonstrated remarkable focus, patience, and competitive spirit throughout the event. The tournament was conducted in a systematic and disciplined manner, ensuring fair play and healthy competition among all participants. Each match reflected the students' ability to think strategically, analyze different situations, and make well-planned decisions under pressure. The event created an atmosphere of learning, collaboration, and mutual respect among the participants.

More than just a game, chess proved to be an effective tool for enhancing cognitive abilities and nurturing qualities such as problem-solving, perseverance, confidence, and logical reasoning. The competition encouraged students to



think creatively, improve their concentration, and strengthen their analytical skills while interacting with their peers. Such co-curricular activities play a vital role in supporting holistic student development by complementing academic learning with practical experiences that build life skills.

The event concluded successfully with appreciation extended to all participants for their enthusiastic involvement and performances. E-certificates will be awarded to the winners in recognition of their outstanding achievement. The खेल Club sincerely thanks all the participants, faculty members, and organizers for their support in making the event a success. The competition reaffirmed the University's commitment to fostering intellectual growth, promoting healthy competition, and encouraging participation in co-curricular activities that contribute to students' overall development.



BEYOND THE CLASSROOMS

Dreams Don't Work Unless You Do

"Success begins with a dream, but it is achieved through hard work."

Every individual dreams of achieving success and creating a meaningful future. Whether the aspiration is to become an engineer, doctor, entrepreneur, scientist, teacher, or leader, dreams provide the motivation to move forward. They inspire us to set goals and give direction to our lives. However, dreams alone are not enough. They become reality only through dedication, discipline, perseverance, and continuous effort. As the saying goes, **"Dreams don't work unless you do,"** reminding us that success is earned through action rather than wishful thinking.

Many people believe that successful individuals achieve greatness because of natural talent or luck. In reality, every accomplishment is the result of hard work, determination, and resilience. Behind every success story are countless hours of learning, practice, sacrifice, and the courage to overcome challenges. Success is never an overnight achievement; it is built gradually through consistent effort and the determination to improve every day.

For students, having a clear goal provides purpose and direction. Whether the aim is academic excellence, a rewarding career, or contributing positively to society, every dream requires commitment and self-discipline. Developing good study habits, managing time effectively, seeking knowledge beyond textbooks, and learning from mistakes are essential steps toward achieving success. Small, consistent efforts made each day eventually lead to remarkable accomplishments.

Failure should never be considered the end of the journey. Instead, it is an opportunity to learn, grow, and become stronger. Every setback teaches valuable lessons, builds confidence, and prepares individuals for future challenges. Many of the world's greatest achievers experienced repeated failures before reaching success because they remained focused on their goals and never gave up. A positive attitude and unwavering determination transform obstacles into stepping stones toward achievement.

University life offers numerous opportunities for students to develop their knowledge, skills, and personality. Participating in workshops, seminars, technical events, sports, cultural programmes, research activities, and community service helps students gain practical experience and become confident, responsible individuals. These experiences enhance leadership, teamwork, communication, and problem-solving abilities while preparing students to face professional and personal challenges with confidence.

Dreams inspire us to aim higher, but hard work turns those dreams into reality. Every student has the potential to achieve great success through determination, continuous learning, and self-belief. Success belongs not only to the talented but to those who remain disciplined, persistent, and committed to their goals.

Dream big, stay focused, and work hard to transform your aspirations into achievements. Never stop believing in yourself, because every great accomplishment begins with a dream and is fulfilled through consistent effort, perseverance, and dedication. Every step you take today brings you closer to the future you aspire to create, making your dreams a reality through determination and unwavering commitment.



Name: Deval Doshi
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Department: D.E CE
Sem: 3

कविता पहाड़ों का जीवन

सीखना है जिंदगी जीना तो सीखों उन पहाड़ों से ।।
कैसे बादलों तक पहुंचना है तो सीखों उन पहाड़ों से।
उन पहाड़ों में एक अलग ही शुकून सा बसा है।
जो शुकून हर कोई ढूंढता है इस जीवन में, पर,
कोई सोच से, तो कोई कर्म से।।
कोई लेने से, तो कोई देने से ।।
कोई अपनों से, तो कोई सपनों से।।
हर बार हम सिर्फ शुकून ढूंढते हैं।।
क्यों हम सिर्फ शुकून ढूंढते हैं?
और वो शुकून कैसे मिलता है पता है?
वो शुकून उन पहाड़ों को याद करने से मिलता है।
वो शुकून उन पहाड़ों को देखने से मिलता है।
वो शुकून हम सिर्फ पहाड़ों में ढूंढते हैं।।
कई बार यादों के लिए, तो कई बार वादों के लिए,
कई बार मुस्कुरा ने के लिए, तो कई बार रोने के लिए,
कई बार सोचने के लिए, तो कई बार खुद को अपना ने के लिए,
बस इस सोच में ख्याल आता मुझे,
सीखना है जिंदगी जीना तो सीखों उन पहाड़ों से,
हर बार हम जीत जाए जरूरी तो नहीं ।
हर बार हमें कामयाबी मिले जरूरी तो नहीं ।
हर बार हम हंसते रहे जरूरी तो नहीं ।
लेकिन फिर भी हम हार मानले जरूरी तो नहीं ।
ये कहानी हर किसी है जो सुना रहे उन पहाड़ों को ,
जिसे सुनके शुकून मिलता है।।
इस लिए तो कहती हूं मैं,
सीखना है जिंदगी जीना तो सीखों उन पहाड़ों से।।।



Name: Vasava Payal Babubhai.
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Sem: 7TH



UPL University of Sustainable Technology is a perfect blend of modern infrastructure, academic excellence, and lush green surroundings, creating an inspiring and vibrant environment for learning, innovation, and personal growth. The campus has been thoughtfully designed to provide students with a comfortable, stimulating, and future-oriented educational experience. Every aspect of the University reflects its commitment to sustainability, technological advancement, and the holistic development of its students.

With state-of-the-art classrooms, well-equipped laboratories, advanced research facilities, modern learning resources, and technology-enabled academic spaces, the University provides students with opportunities to transform theoretical knowledge into practical skills. These facilities encourage curiosity, experimentation, problem-solving, and innovation, enabling students to explore new ideas and develop solutions to real-world challenges. The campus environment promotes interdisciplinary learning and encourages students to look beyond conventional boundaries.

The lush green landscape and beautifully maintained surroundings add a sense of tranquillity and harmony to the campus. Green spaces, open areas, and environmentally conscious practices create a refreshing atmosphere where students can learn, interact, and reflect. The integration of nature with modern infrastructure represents the University's vision of achieving a balance between technological progress and environmental responsibility. It also inspires students to understand the importance of sustainability and to become responsible contributors to society and the planet.

UPL University of Sustainable Technology is a perfect blend of modern infrastructure and lush green surroundings, creating an inspiring environment for learning and innovation. The campus reflects the University's commitment to academic excellence, sustainability, and holistic development. With state-of-the-art facilities and a serene atmosphere, it empowers students to grow, explore, and excel. Every corner of the campus symbolizes the University's vision of nurturing future-ready professionals and responsible global citizens. The vibrant academic environment encourages creativity, research, and lifelong learning. It is a place where knowledge, values, and innovation come together to shape the leaders of tomorrow. The beautifully maintained campus inspires students to dream big and achieve their goals with confidence. It truly stands as the heart of the institution, fostering excellence, integrity, and a culture of continuous growth.



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Nature's Serenity



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Nature reminds us of the importance of preserving our environment and living in harmony with it. The lush green hills, refreshing rain, and serene landscapes showcase the beauty and richness of our natural surroundings. These breathtaking views inspire peace, positivity, and a deeper appreciation for the environment, encouraging us to protect nature for future generations. They also remind us that a healthy environment is essential for sustainable living and overall well-being. Every season reflects the beauty of nature and motivates us to cherish, conserve, and celebrate the world around us. Such scenic landscapes encourage us to adopt environmentally responsible practices and value the gifts of nature. By protecting our natural resources today, we ensure a greener, healthier, and more sustainable future for generations to come.



NAME: Yug Rana
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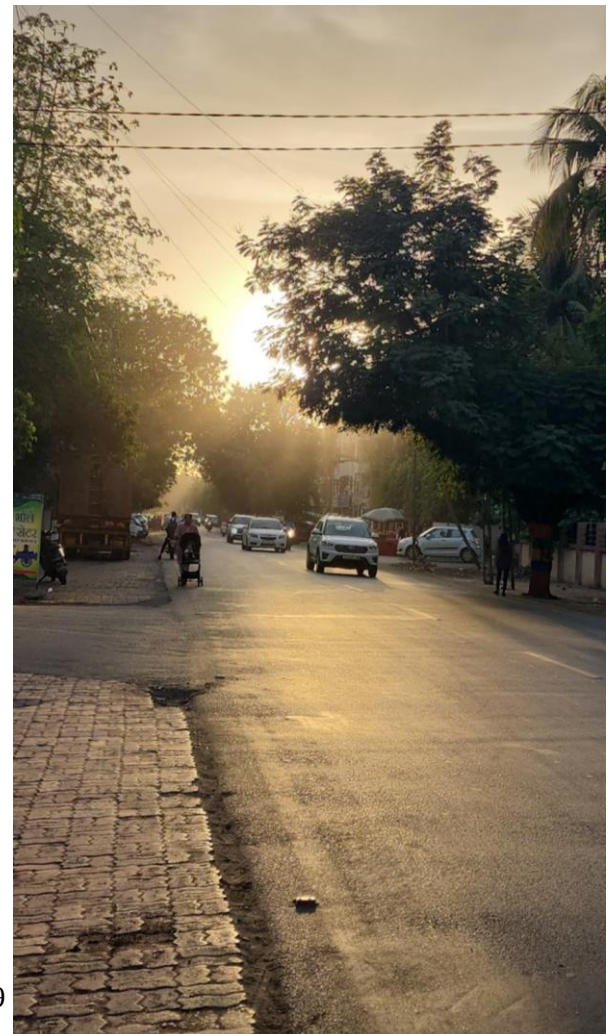
Patel Meet
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Sem: 5th

Nature has a unique way of inspiring us through its countless wonders. The vibrant bird symbolizes the richness of biodiversity, reminding us of the importance of protecting wildlife and preserving the delicate balance of nature. Every living creature plays a vital role in maintaining ecological balance and enriching the beauty of our surroundings.

The golden rays of the setting sun create a breathtaking view, filling the sky with warmth, peace, and hope. Such serene moments encourage us to pause, reflect, and appreciate the simple yet extraordinary gifts of nature. They remind us that every day offers a new opportunity to learn, grow, and embrace life's beauty. These captivating scenes inspire us to value and conserve our natural environment for future generations. By protecting wildlife, preserving green spaces, and adopting sustainable practices, we contribute to a healthier and more harmonious world. Nature's beauty is not only a source of joy and inspiration but also a constant reminder of our responsibility to protect and cherish the planet we call home.



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Sem: 3rd





The Department of Chemistry, SRICT – Institute of Science & Research, under the पाठ्येतर Club, successfully organized a Photography Blog Competition on the theme "Monsoon Vibes – Every Picture Has a Story." The event was designed to encourage students to capture the beauty of the monsoon season through original photography while expressing their thoughts and experiences through creative blog writing. The competition aimed to nurture creativity, observation, storytelling, and communication skills by providing students with an opportunity to combine visual art with written expression. The competition witnessed enthusiastic participation from 10 undergraduate and postgraduate students, who submitted their original photographs accompanied by thoughtfully written blogs. Each entry reflected the participants' creativity, imagination, and ability to narrate compelling stories inspired by the monsoon season. A special "Meet the Photographer" Session added value to the event, allowing participants to share the inspiration, emotions, and experiences behind their photographs. The interactive session encouraged meaningful discussions and provided students with an opportunity to appreciate different perspectives while learning from one another's creative journeys. After a thorough evaluation by the judges based on originality, creativity, presentation, and storytelling, the winners were announced: Rana Deep Kumar Snehalbhai secured the First Position, Yash Natankar Dhiraj earned the Second Position, and Heer Rakeshbhai Shah achieved the Third Position.



The provided image captures a breathtaking and vibrant view of nature during a heavy downpour. At the center of the frame stands a magnificent, lush green banyan-like tree, fully drenched and rejuvenated by the rain. Surrounding it is a dense cover of tropical foliage, punctuated by beautiful pink blossoms that add a vibrant contrast to the green backdrop. The paved stone pathway in the foreground is completely soaked, reflecting the dim light and showing tiny ripples created by the falling raindrops. On the left, a small, traditional lantern-style lamp post adds a charming aesthetic touch to the landscape. In the background, the blurred silhouettes of buildings and the misty air evoke a sense of deep tranquility and freshness, showcasing the calming and life-giving power of the monsoon season.



India's rich cultural heritage comes alive through its diverse and vibrant art forms, each reflecting centuries of tradition, devotion, and creativity. The intricate artwork inspired by **Lord Jagannath** and the colorful tribal painting beautifully portray the essence of Indian culture, showcasing its artistic brilliance and timeless traditions. Every brushstroke and pattern tells a unique story, preserving the values and customs passed down through generations.

Traditional art is not merely a form of decoration but a powerful expression of history, identity, and cultural pride. The vibrant colours, intricate designs, and symbolic motifs represent the creativity, patience, and craftsmanship of skilled artisans. These artworks remind us of the importance of preserving our cultural legacy while inspiring future generations to appreciate India's rich artistic traditions.

Art also serves as a bridge between tradition and modernity by encouraging creativity, imagination, and self-expression. It nurtures an appreciation for cultural diversity and motivates young minds to explore and preserve traditional art forms. Through such artistic

expressions, students develop a deeper understanding of the nation's heritage while enhancing their creative and aesthetic abilities.

The **Colours of Cultural Legacy** celebrate the beauty of India's artistic traditions and the enduring spirit of its culture. They remind us that preserving our heritage is a shared responsibility and that every work of art carries the legacy of our ancestors. By embracing these traditions, we continue to strengthen our cultural identity and inspire generations to cherish the richness of India's timeless heritage.



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Sem: 3rd



Sparsh Prasad B.E.
Mechanical Engineering
| Batch 2018–2022

1. My University Journey

What do you remember most about your student years?

My university journey was a memorable and enriching experience that shaped both my personal and professional growth. Pursuing B.E. in Mechanical Engineering from 2018 to 2022 gave me the opportunity to learn, explore, take on challenges, and build lasting experiences. What I remember most is the learning environment, the interactions with faculty and fellow students, and the opportunities to develop a mindset of curiosity and continuous improvement. Although my career eventually took me into the IT industry, the foundation I built during my university years continues to influence the way I approach challenges and opportunities.

2. What I Learned

What knowledge, skill or experience from the University has helped you most in your career?

One of the most valuable lessons I gained from university was the ability to **learn continuously, adapt to new situations, and solve problems systematically**. My Mechanical Engineering education taught me to approach challenges logically and analytically. These skills have proved extremely valuable in my transition into the IT industry, where I have worked with Salesforce, software development, cloud technologies, and emerging AI capabilities. The university experience also taught me the importance of teamwork, discipline, perseverance, and being open to learning something new. These qualities have helped me grow from an engineering graduate into a technology professional and successfully work on diverse business and technology requirements for clients across different regions.

3. A Turning Point

Was there a particular teacher, project, challenge or experience that influenced your journey?

A major turning point in my journey came after graduation, when I made the decision to transition from Mechanical Engineering into the IT industry. It was a challenging step because it meant entering a completely different professional domain and developing new technical skills.

Starting my career as an **Associate Software Engineer at Perigeon Software** gave me the opportunity to turn that challenge into a learning experience. I gradually developed expertise in Salesforce, software development, cloud technologies, and AI-driven solutions.

The journey taught me that our degree does not have to define the limits of our career. With curiosity, determination, and a willingness to learn, we can successfully explore new fields and create opportunities for ourselves.

My professional growth has since been reinforced through continuous learning and industry certifications, along with recognitions such as **Best Quarter Performer (Oct–Dec 2024)**, **Best Employee of the Year (2024–25)**, **Performer of the Year (2025–26)**, **Star Performer of the Year (2025–26)**, and being a **#BuildWithAgentforce Quest Winner** for demonstrating innovation in Salesforce Agent force and AI.

4. My Message to Today's Students

What advice would you give to current students?

My advice to today's students is simple: **never limit yourself to what you are studying today.**

Build a strong foundation, but remain curious about the world beyond your core field. Technology and industries are evolving rapidly, and the ability to learn, adapt, and continuously upgrade your skills is more valuable than ever. Do not be afraid to change direction if you discover a new passion. My own journey from Mechanical Engineering to IT and then into Salesforce and AI has taught me that a career is not always a straight path. Every challenge can become an opportunity to learn and grow.

Most importantly, focus on **learning rather than simply chasing achievements**. Stay consistent, embrace challenges, seek guidance from mentors and teachers, and keep improving yourself. With dedication and an open mindset, you can create a career that goes beyond the boundaries you initially imagined.

Believe in your ability to learn, adapt, and build your own path.



Contact us

This magazine is quarterly published. It is freely available online at <https://upluniversity.ac.in/news-letter>. You can share your suggestions to kathan@upluniversity.ac.in.

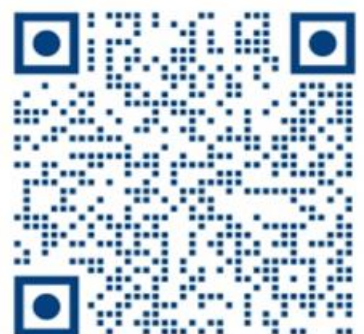
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