

The Digital Renaissance

Exploring the fusion of technology, creativity, and knowledge





TECHNOCRATS INSTITUTE OF TECHNOLOGY (Excellence)

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राज्यपाल, मध्यप्रदेश भोपाल - 462052



मंगुभाई पटेल

मुझे यह जानकर प्रसन्नता हो रही है कि टेक्नोक्रेट्स इंस्टीट्यूट ऑफ टेक्नोलॉज (एक्सीलेंस), भोपाल द्वारा वार्षिक पत्रिका का प्रकाशन किया जा रहा है।

शिक्षण संस्थानों द्वारा पत्रिका का प्रकाशन विद्यार्थियों के लिए विचार वभावों को अभिव्यक्त करने का सशक्त माध्यम है। इस प्रकार की पत्रिकाएं विद्यार्थियों को निखारने में सहायक होती है। मुझे आशा है कि देश प्रेम और चरित्र निर्माण जैसे वभिन्न पहलुओं से संबंधित पठनीय सामग्री का समावेश किया जाएगा जिससे देश में जिम्मेदारी युवा पीढी का निर्माण सुनिश्चित हो सकेगा। शुभकामनाएं

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Message

I am delighted to know that Technocrats Institute of Technology (Excellence) is going to publish their Annual College Magazine 'Shikhar 2024 - 25'

The publication of the organisations magazine plays a pie hotel role in bringing forward the versatile talent of the students and its paramount for their overall personality development the magazine truly reflex the activities of the college and intellectual level and ideas of students and faculty members I believe this effort will be successful in its objectives and will serve as a roll model for future generations.

Pro. Dr. Virendra Kumar









राजीव गांधी प्रौद्योगिकी विश्वविद्यालय (मध्यप्रदेश का तकनीकी विश्वविद्यालय)

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(Accredited with "A" grade by NAAC)
DO Letter No.Rgpv/Vco/2025/30
Date: 24/02/2025

VICE CHANCELLOR'S MESSAGE

I am delighted to learn that the **Technocrats Institute of Technology (Excellence)** is bringing out its Annual College Magazine "**Shikhar-2025**"

A college magazine is an authentic record of the various activities that are undertaken by the college throughout the year. It is a platform for the students to explore their talent. The magazine is not only informative but also has a great educational value. College magazine always portrays the thoughts, ideas, dreams, creative writings and aspirations of young minds and it is a platform that provides exposure and freedom to express your views.

The foremost mission of an institution should be to provide an environment that allows future leaders to realize their potential fans sure that the institute shall continue to put its all round efforts for continuous improvement of the academic and extra curricular environment in the campus, which will be beneficial for nurturing a successful professional and good human being for the society.

I appreciate the hard work and efforts in bringing out this magazine. I heartily congratulate the Faculty, Staff Members of the Editorial Board and students for their tireless efforts and wish the mail the best.

(Prof. Rajeev Tripathi)



CHAIRPERSON'S MESSAGE

As I pen down this message for Shikhar 2025, I am filled with immense pride and admiration for the young minds who have worked tirelessly to bring this magazine to life. This annual publication is more than just a compilation of words—it is a testament to the passion, creativity, and dedication of our students. It reflects the dreams, achievements, and relentless pursuit of excellence that define the spirit of TIT Technocrats.

To the editorial team, I extend my heartfelt appreciation. Your hard work, perseverance, and commitment have transformed this magazine into a platform of expression, inspiration, and excellence. Every article, every story, and every achievement highlighted here speaks volumes about the immense potential and talent that resides within our institution.

Dear students, as you turn these pages, I encourage you to embrace the journey of learning with an open heart and an unyielding spirit. Dream big, chase your aspirations fearlessly, and never hesitate to take that extra step toward greatness. Remember, success is not just about reaching a destination; it is about the lessons you learn, the challenges you overcome, and the person you become along the way.

TIT Technocrats has always been a place where knowledge meets innovation, and aspirations turn into achievements. I am confident that with your passion and perseverance, you will continue to scale new heights and make us proud.

Wishing you all the very best in your endeavours. Keep learning, keep growing, and most importantly, keep believing in yourself.

With warm regards and best wishes,

Chairperson



VICE CHAIRMAN'S MESSAGE

"Success begins where determination meets opportunity
—believe, persevere, and achieve."

As you stand at the threshold of new opportunities, I extend my heartfelt wishes to each one of you for a bright and successful future. Your journey at TIT Technocrats has been one of learning, growth, and perseverance, and now, as you step into the professional world, I am confident that you will make a mark with your skills and determination.

A special appreciation goes to the editorial team, whose hard work and commitment have shaped this publication into a meaningful and inspiring compilation. Your efforts in curating stories, achievements, and experiences have created a platform that not only showcases academic brilliance but also motivates and connects our students and faculty.

As you turn the pages of this magazine and embark on new journeys, I encourage you to continue striving for excellence in all aspects of life. The lessons you have learned here, the friendships you have built, and the challenges you have overcome will serve as stepping stones to a future filled with success and fulfillment.

Believe in yourself, embrace new opportunities with confidence, and let your passion drive you toward greater heights. The world is full of possibilities, and I have no doubt that you will carve a path of remarkable achievements and contributions.

Vice Chairman



MANAGING DIRECTOR'S MESSAGE

In this era of rapid transformation, where technology, creativity, and knowledge intertwine to shape the future, it is inspiring to witness our students embracing innovation with such enthusiasm. The world around us is evolving at an unprecedented pace, and as future leaders, it is crucial to not only adapt but also to drive change with vision and purpose.

The theme "The Digital Renaissance" perfectly encapsulates the journey we are all a part of—a movement where education is no longer confined to books, where creativity fuels groundbreaking ideas, and where technology empowers us to redefine possibilities. I encourage each of you to explore, innovate, and push boundaries, ensuring that you not only keep pace with progress but also contribute meaningfully to it.

I extend my heartfelt appreciation to the editorial team for their dedication and hard work in curating a platform that celebrates excellence, thought leadership, and the boundless potential of our students. Your efforts serve as an inspiration, fostering a culture of curiosity and learning.

To all our students—dream fearlessly, work relentlessly, and let your passion guide you toward success. The future belongs to those who dare to think differently, and I have no doubt that you will leave an indelible mark in your respective fields.

Wishing you all the very best in your academic and professional journeys. May you continue to rise and make TIT Technocrats proud!

With best wishes,

Managing Director





DIRECTOR'S MESSAGE

"Knowledge is the foundation, creativity is the tool, and technology is the bridge to a limitless future."

Dear Students, Faculty, and Readers,

In today's fast-evolving world, where technology and creativity intersect, it is not enough to just acquire knowledge—we must apply it in innovative ways. The theme "The Digital Renaissance" perfectly reflects the transformative power of education, critical thinking, and technological advancement.

At TIT Technocrats, we are committed to fostering an environment where students not only learn but also experiment, innovate, and lead. The skills and knowledge you gain today will shape the solutions of tomorrow. Embrace curiosity, be fearless in your aspirations, and always strive for excellence.

A special note of appreciation to the editorial team, whose passion and commitment have made this magazine a true celebration of talent and intellect. May this edition ignite new ideas and inspire all who read it.

Best wishes for a bright and successful future!

Dr. Sanjay Sharma

Director, Technocrats Institute of Technology (Excellence)





VICE PRINCIPAL'S MESSAGE

"The future belongs to those who harness the power of knowledge and innovation." Dear Students,

In the age of the Digital Renaissance, where technology is reshaping industries and knowledge is more accessible than ever, it is vital to develop a mindset of lifelong learning and adaptability. Education is no longer just about gaining information; it is about using that information to solve real-world challenges, think creatively, and drive meaningful change.

At TIT Technocrats, we take pride in nurturing an ecosystem that encourages experimentation, leadership, and problem-solving. Your perseverance, dedication, and willingness to explore will set you apart in this fast-changing world. Keep pushing your limits, stay curious, and never underestimate the power of hard work and determination.

I commend the editorial team for their outstanding efforts in crafting this year's edition of Shikhar. May it serve as a source of motivation and inspiration for all.

Wishing you great success in all your future endeavors!

Dr. Sibi Jose



CHIEF EDITOR'S MESSAGE

In an age where technology is not just an enabler but a catalyst for transformation, I am honored to present Shikhar 2024-25, the annual newsletter of Technocrats Institute of Technology (Excellence). This edition, themed "The Digital Renaissance", celebrates the convergence of technology, creativity, and knowledge—an era where innovation is not confined to laboratories but is woven into every aspect of human endeavor.

As an educator, I have witnessed the profound impact of digital advancements in education, research, and professional spheres. The world today demands more than just technical proficiency; it seeks creative problem-solvers, critical thinkers, and innovators who can bridge the gap between traditional wisdom and futuristic technologies. At TIT (Excellence), we are committed to cultivating this blend, ensuring that our students are equipped not only with theoretical knowledge but also with the practical and creative acumen needed to thrive in this digital-first world.

This issue of Shikhar encapsulates the relentless pursuit of excellence by our students and faculty. It highlights groundbreaking research, technological innovations, industry collaborations, and cultural and academic milestones that define our institution's progressive ethos. From AI-driven solutions and sustainable engineering projects to artistic expressions enhanced by digital tools, every initiative reflects our drive to lead in an era where digital intelligence is reshaping possibilities.

Beyond the walls of our classrooms and labs, technology has also redefined how we communicate, create, and connect with the world. As we embrace The Digital Renaissance, we recognize that the future belongs to those who can seamlessly integrate knowledge with innovation. The fusion of art and science, logic and intuition, creativity and computation is no longer a distant dream but a reality unfolding before us. At TIT (Excellence), we take pride in nurturing this vision—one where our students not only adapt to change but drive it with confidence and curiosity.

I extend my deepest gratitude to the contributors, faculty members, students, and our editorial team who have worked diligently to bring this edition to life. Shikhar 2024-25 is more than just a publication; it is a testimony to the passion, dedication, and aspirations of our Technocrats family. May this edition inspire, inform, and ignite a spirit of innovation in all who read it.

Let us continue to embrace learning, creativity, and technological evolution with an open mind and an ambitious heart. The future is digital, and the possibilities are limitless!

With best regards,

Priyanka Rai Chief Editor







STUDENT CHIEF EDITOR'S MESSAGE

With great enthusiasm and pride, I present Shikhar 2024-25, the annual newsletter of Technocrats Institute of Technology (Excellence). This edition, centered around the theme "The Digital Renaissance", reflects the fusion of technology, creativity, and knowledge—three pillars shaping the world we live in today.

As students, we are not just witnesses but active participants in this transformation. The rapid advancements in artificial intelligence, automation, and digital communication have redefined the way we learn, innovate, and collaborate. This issue of Shikhar captures how our institution is embracing this new era, highlighting pioneering research, inspiring achievements, creative projects, and thought-provoking ideas that demonstrate our collective commitment to progress.

Beyond academics, Shikhar 2024-25 also celebrates the diverse talents and aspirations of our student community. It showcases the innovative projects, cultural expressions, entrepreneurial initiatives, and leadership experiences that make TIT (Excellence) a hub of learning and creativity. This newsletter is not just a record of our journey but a testament to our ability to think beyond boundaries, push limits, and redefine possibilities.

Being a part of this editorial team has been an incredible journey—one filled with learning, collaboration, and the joy of storytelling. I extend my heartfelt gratitude to our faculty mentors, contributors, and editorial team for their relentless efforts in curating this edition. It is our hope that Shikhar 2024-25 serves as a source of inspiration, motivating every reader to embrace the opportunities of this digital era with curiosity, innovation, and determination. The future is being shaped today, and as students of TIT (Excellence), we are ready to lead the

way!

Happy reading!

Ankit Kumar Patel
Chief Editor
Student Editorial Board



The Digital Renaissance: A New Era of Innovation and Creativity

The world is witnessing an era of rapid transformation, where technology is not just a tool but a driving force reshaping the way we learn, create, and innovate. As we step into Shikhar 2024-25, we embrace this change with the theme "The Digital Renaissance", a celebration of the fusion of technology, creativity, and knowledge—three fundamental elements defining the future. Background dlana hai

The term Renaissance historically signifies a revival of art, culture, and intellect, leading to an age of enlightenment. Today, we are experiencing a similar movement—one driven by artificial intelligence, automation, digital communication, and boundless innovation. This Digital Renaissance is empowering individuals to break traditional boundaries, making learning more immersive, creativity more boundless, and knowledge more accessible than ever before.

At Technocrats Institute of Technology (Excellence), we recognize that adapting to this transformation is not enough—we must lead it. Our students and faculty are at the forefront of innovation, actively exploring ways to integrate technology into education, research, and problem-solving. Whether through AI-driven solutions, sustainable engineering projects, digital entrepreneurship, or artistic expression enhanced by virtual tools, TIT (Excellence) is fostering a culture where technology and creativity go hand in hand.

One of the defining characteristics of this era is the seamless blending of technology and creativity. No longer confined to separate domains, science and art now coexist in a digital ecosystem that enables groundbreaking discoveries. The rise of AI-powered art, virtual reality experiences, blockchain innovations, and advanced data analytics has expanded the boundaries of what is possible. Students today are not just consumers of knowledge but creators of solutions that redefine industries, reshape economies, and challenge the conventional ways of thinking.

With unlimited access to information, learning has undergone a paradigm shift. Traditional classrooms have transformed into dynamic, interactive, and collaborative spaces where ideas transcend geographical boundaries. As we stand at the threshold of this Digital Renaissance, we must ask ourselves: How can we leverage technology to drive meaningful change? How do we balance innovation with ethics, progress with responsibility? The answers lie in our willingness to explore, experiment, and evolve. It is this very spirit that Shikhar 2024-25 embodies—one that encourages us to embrace technological advancements while preserving the essence of human creativity and intellectual curiosity.

The pages of this edition showcase the incredible work being done by our students and faculty, highlighting research breakthroughs, entrepreneurial endeavors, creative expressions, and academic excellence. It is a reflection of how TIT (Excellence) continues to push boundaries, preparing future leaders, thinkers, and innovators for the challenges and opportunities of the digital age.

As members of the Editorial Board, we are proud to bring you this edition of Shikhar. We extend our heartfelt gratitude to the contributors, faculty mentors, and the entire Technocrats family for their unwavering support. May this issue serve as a source of inspiration, encouraging each reader to embrace the digital revolution, think beyond limits, and shape a future where technology fuels creativity and knowledge thrives without boundaries.

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Shikhar 2024-25
Technocrats Institute of Technology (Excellence)



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HOD Message Computer Science & Engineering & Allied Branches

It is my pleasure to address you through the pages of our yearly college magazine. As the Head of the Department of Computer Science and Engineering, I am immensely proud of the achievements of our students and faculty members over the past academic year

Our department has witnessed some remarkable developments in terms of research, innovation, and academic excellence. Our faculty members have published numerous research papers in reputed journals and conferences, and many of them have also received funding for their research projects.

Our students have also made us proud by participating and winning in various national and international competitions, hackathons, and coding challenges. Their projects have received accolades from industry experts, and some of them have even been implemented in real-world scenarios.

As we move forward, we strive to maintain our commitment to excellence in teaching and research. We will continue to provide our students with the best possible education and equip them with the necessary skills to become successful professionals in the industry.

I extend my warmest wishes to all our students and faculty members for their continued dedication and hard work, and I look forward to another successful year ahead.

CSE (HOD)TIT (Excellence)

Department of Computer Science & Engineering

Vision of the Department

To produce technically and ethically competent, socially responsible and innovative Computer Science & Engineering professionals through quality education, who can contribute in techno and socio-economic development of the nation as a whole and region in particular.

Mission of the Department

M1: To create an academic ambience for achieving academic excellence by imparting in depth domain knowledge to the students through effective teaching learning, conceptual and practical exposure with latest tools and technologies.

M2: To provide an environment & opportunity for students to utilize their potential and technical skills required for overall development through collaborative and professional activities.

M3: To inculcate innovative research skills, promote professional ethics & entrepreneurship skills amongst the students to cater the needs of the Society.

CSE Glances





Department of Computer Science & Engineering

BATCH: 2020-24





DAZZLING STARS

Academic Year 2024-2027

Final Year







Third Year







Second Year







First Year









AI in Art: How Machine Learning is Transforming Creative Expression

In the ever-evolving landscape of technology, Artificial Intelligence (AI) has emerged as a powerful tool that is reshaping numerous industries, including the world of art. What was once solely the domain of human

imagination and creativity is now being augmented and transformed by machine learning algorithms. This fusion of technology and artistic expression is giving rise to a new era—the Digital Renaissance—where AI is not just a tool but a collaborator in the creative process.



Understanding AI in Art

AI in art refers to the use of machine learning algorithms and deep neural networks to create, modify, and interpret artistic works. These systems analyze vast amounts of data, learn

patterns, and generate outputs that can resemble or even surpass human creativity. From generating paintings and composing music to creating immersive digital experiences, AI is broadening the scope of what is possible in the realm of artistic expression.

The Evolution of AI-Generated Art

The journey of AI in the art world began with basic algorithms capable of mimicking simple designs. Today, advanced AI models like Generative Adversarial Networks (GANs) and Neural Style Transfer have taken artistic creativity to new heights. One of the most groundbreaking moments came in 2018 when an AI-generated painting titled "Portrait of Edmond de Belamy" was auctioned at Christie's for \$432,500, signaling AI's acceptance as a legitimate creative force.

How Machine Learning Powers Creativity

Machine learning, a subset of AI, involves training algorithms on vast datasets. In the context of art, these datasets might include thousands of images, musical compositions, or literary works. The AI uses this data to:

- Generate New Artworks Algorithms like DALL E and Stable Diffusion can produce original images based on textual descriptions.
- Enhance Creativity AI tools assist human artists by suggesting new styles, enhancing existing pieces, and automating repetitive tasks.
- Personalize Art AI can tailor artistic experiences to individual tastes, generating unique artworks based on user preferences.
- Revive Lost Styles AI helps recreate and preserve lost artistic styles, breathing new life into historical
 art forms.



Notable AI Art Projects

Several projects and collaborations highlight how AI is transforming creative expression:

- **Deep Dream** An initiative by Google that visualizes how neural networks interpret images, resulting in surreal, dream-like artwork.
- AIVA (Artificial Intelligence Virtual Artist) An AI capable of composing original symphonies and soundtracks.
- The Next Rembrandt A project where AI analyzed Rembrandt's works to create a new painting in his signature style.



Challenges and Ethical Considerations

Despite its potential, AI in art raises important questions:

- 1. **Originality vs. Automation** Can AI truly "create," or is it merely replicating existing styles?
- 2. **Authorship** Who owns the rights to AI-generated art—the programmer, the user, or the machine itself?
- 3. **Ethical Use** Concerns about AI reproducing biased or inappropriate content remain a significant challenge.

The Future of AI and Art

As AI continues to evolve, it is likely to become an even more integrated part of the artistic process. Future developments may include:

- Collaborative Art Human artists working alongside AI to co-create complex, interactive installations.
- AI Art Therapists Using AI-generated art for mental health and therapeutic purposes.
- Immersive Experiences AI-driven virtual and augmented reality environments that redefine storytelling.

Conclusion

The fusion of AI and art represents a profound shift in how we understand and engage with creative expression. This Digital Renaissance is not about replacing human creativity but expanding its boundaries. AI is a new brush in the artist's toolkit—one that opens doors to uncharted territories of imagination, blurring the lines between the human and the machine. As we navigate this exciting frontier, the possibilities for innovation and artistic exploration are limitless.

In the age of AI, creativity is no longer confined to human hands—it is a shared journey between minds, both organic and artificial.

Anand Soni CSE, VII Sem



Cybersecurity in the Digital Age: Balancing Innovation and Privacy

In an era where digital technology drives nearly every aspect of modern life, cybersecurity has become a crucial concern. As innovation accelerates, offering new possibilities and conveniences, it also brings

unprecedented risks to privacy and data security. From online banking and smart homes to social media and cloud storage, our digital footprints are expanding rapidly, making us more vulnerable to cyber threats than ever before.

The rise of advanced technologies like artificial intelligence, machine learning, and the Internet of Things (IoT) has transformed the way we interact with the world. However, these innovations also create new entry points for cybercriminals. Data breaches, ransomware attacks, and identity theft are no longer rare occurrences but part of a growing global challenge. Organizations and individuals alike must constantly adapt to protect sensitive information from falling into the wrong hands.

One of the most significant dilemmas in the digital age is the balance between innovation and privacy. On one hand, technological advancements promise efficiency, convenience, and improved services. On the other hand, the same innovations can erode personal privacy if not managed responsibly. Social media platforms, for instance, enable global connectivity but also collect vast amounts of user data, raising questions about how that information is used and shared. Similarly, while smart devices offer enhanced living experiences, they also continuously gather data, posing potential risks if that data is compromised.

Governments and regulatory bodies worldwide are grappling with the challenge of establishing laws to protect privacy without stifling innovation. Regulations like the General Data Protection Regulation (GDPR) in Europe and the Digital Personal Data Protection Act in India reflect efforts to enforce data security while allowing technological growth. Companies are also investing in advanced cybersecurity measures such as encryption, multi-factor authentication, and artificial intelligence-driven threat detection systems to safeguard their users' data.

However, cybersecurity is not solely the responsibility of governments and corporations. Individuals must also take steps to protect their privacy. Simple actions like using strong passwords, enabling two-factor authentication, and being cautious about sharing personal information online can go a long way in reducing risk. As cyber threats become more sophisticated, awareness and proactive measures are essential for maintaining privacy in a connected world.

Striking a balance between innovation and privacy is a delicate task, requiring continuous collaboration between technology developers, lawmakers, and the public. Innovation should not come at the expense of personal security, and privacy should not hinder technological progress. The future of cybersecurity lies in fostering an environment where advancements can thrive without compromising the fundamental right to privacy. As technology continues to evolve, so must our commitment to protecting the digital world we increasingly depend on.

Ankit Kumar Singh CSE (Cyber Security), IV Sem



I Can't Promise You...

I can't promise you that there be no dark clouds over us But i tell you that i'll ever hold the umbrella.. till the rain stops.

I can't promise you the stars.

But you can watch my eyes whenever I look at you as they shine brighter..

I can't promise you no fights and problems..

But i'd say

You won't fight the problems alone..

I can't promise you that i'll understand, But i'll do if u make me...

I can't promise that i am staying forever,

Because promises are when you doubt the things but still you want to be imposed with..

And i am not in doubt for you..

So to be imposed

Suraj Kumar CSE, IV Sem



Tech Driven Dreams: The Digital Renaissance

The world is undergoing a transformation like never before. We live in a time when creativity and technology converge to redefine what is possible. In this era of the Digital Renaissance, every idea matters, and every line

of code, every stroke of a brush, and every word written contributes to a new chapter in our shared human story. I remember the moments when I sat by a window watching the city lights flicker in the night.

In those quiet moments, I saw not just the hustle of everyday life but a canvas of dreams waiting to be painted with innovation. It was in these moments that I began to understand that technology is not cold or distant. It is the heartbeat of progress, the pulse of our modern lives, and it speaks to us in ways that are both gentle and powerful.



Technology is more than circuits and screens. It is a living force that empowers us to overcome boundaries that once seemed insurmountable. With every new discovery and breakthrough, we inch closer to a future where human potential is unleashed. In this new world, creativity becomes a bridge that connects our past experiences to the endless opportunities of tomorrow. I often reflect on the simple truth that every great invention began as a spark of human imagination. When I think of the marvels around us today, I see a reflection of countless minds that dared to dream. Their journeys remind me that the power to create lies within each of us. The Digital Renaissance is not reserved for a select few. It is a movement open to anyone willing to challenge the ordinary and believe in the extraordinary.

My journey has taught me that obstacles are not dead ends but opportunities for growth. The path to innovation may be filled with uncertainty, yet it is in those moments of challenge that we discover our inner strength. Every setback has been a lesson, every failure a stepping stone toward success. The true measure of progress is not found in the absence of struggle but in our ability to rise above it and transform adversity into triumph.

In this spirit, I embrace the Digital Renaissance with passion and determination. I choose to see the world as a place brimming with possibility. I choose to build, create, and share my vision with others. My work is a testament to the idea that technology, when guided by human empathy and ingenuity, can lead us to a brighter future. It is a future where every person can contribute, where each idea is valued, and where our collective creativity propels us forward.

Aditya Kokashe CSE, VI Sem



Draupadi: The Embodiment of Courage, Dignity, and Devotion

In the Indian history, womens opinions, suggestions and perspectives were never considered. Making an appearance from the sacrificial fire, Draupadi was a paradigm of Dharma. Draupadi, altogether, was a different woman at her time. At that time, where men had the liberty to have as many wives as they wish to

have, Draupadi was a wife to five men, the pandavas brothers, which was a great deal then

Duryodhan ordered Dushasana to drag Draupadi by her hair to the royal court before the great assembly of people and then to disrobe her completely. Karna calling her a public woman whose being clothed or naked is immaterial. Draupadi looked at all elders in the court - Dhritarashtra, Bheeshma, Drona, Kripa and Vidura - with her eyes shouting for help. But all elders were silent. The subjects were stunned. Her husbands sat with their heads bowed. Draupadi had a marvelous blend of intensity that



suits kshatriyas and forgiveness that fits devotees. She was very intelligent and knowledgeable. She had a brilliant mind, was utterly "one-in-herself" and did not hesitate in reprimanding the Kuru elders for countenancing wickedness. When Dushasana was dragging her by the hair to the court, she ridiculed him to show his prowess against her husbands. She also boldly reprimanded the elders present in the court and appealed to them to do justice. She cried out to her silent husbands. But nobody came for help. Finding no response, with quicksilver presence of mind she seizes upon a social ritual to wrest some moments of respite from pillaging hands.

The wicked Dushasana began to pull at her saree. Draupadi's weeping and wailing would have moved a stone to mercy. Draupadi turned to Lord Krishna as her husbands bowed their heads in shame. She threw out both hands and with both hands in salutation she cried to Krishna, and miraculously the more Dushasana pulled her robe, the more it was still there on her person. Several meters of the robes he pulled, yet it was still there. Dushasana was tired drawing her saree but he could not find the end of it. This shows us the bond between a brother and sister or the promise of security. Draupadi gave to Lord Krishna one small strand from her saree to tie on his injured finger, during a duel with the cruel Shishupala. At that moment, Krishna had promised Draupadi of constant security. Lord Krishna kept his promise during this trying moments of Draupadi and gave her an endless saree, one which could never be removed and thus protected her honour.

AISHWARYA BHATT AIML, IV Sem



काम से आते बनिहार

शाम होते-होते बस सूरज नहीं जाता घर! आते हैं कुछ लोग भी लौटकर! कच्ची सड़को से..

चांद भी आ जाता है देखने उनकी देह! पसीने में भीग कर, अपने ऊपर सफेद! नमक सी परत चढ़ाए, चांद की रोशनी में चमकती है, चांदी!



तुम लोगों के हिसाब से न बोलो, तो एक मजाक हो। तुम लोगों के हिसाब से न चलो , तो अचल हो। सच में ये दुनिया बड़ी अजीब है।। तुम लोगों के हिसाब से न गाओ तो बेसुरे हो। तुम लोगों के हिसाब से न रहो । क्यों जिंदा हो तुम। सच में ये दुनिया बड़ी अजीब है।। ये दुनिया लोभी होने के बाद भी। तुमसे मोह रखती है।



चांदी का भाव ? मुश्किल से मिलता हो ! क्या ? उन्होंने देखी होगी, चांदी !

दिन भर लू में तप कर कंधे पर गमछा डाले, नंगे बदन पर फटी बनियान ! मटमैली धोती, पैंट ?

वो भी है बेताब, फेंके जाने को.. पर ऐसा करना बहुत कठिन मालूम पड़ता है!

फिर भी खुशी से नाचते! आ रहे हैं, मेरे खेत से, लौटते कच्ची सड़क से,

काम से आते बनिहार...

Rohit Kumar CSE-AIML, IV Sem



HOD Message Department Of Civil Engineering

It is a matter of great pride to witness the release of Shikhar 2024-25, a magazine that reflects the dedication, creativity, and technical brilliance of our Civil Engineering students. This publication serves as a platform for showcasing innovative ideas, research, and the collective achievements of our department.

The field of Civil Engineering continues to evolve, demanding sustainable solutions and advanced technologies to address modern challenges. At the Civil Engineering Department, we are committed to providing an education that blends strong technical knowledge with practical exposure. Our students are encouraged to think critically, engage with real-world problems, and contribute meaningfully to society.

I extend my best wishes to the editorial team and all contributors for their efforts in bringing this magazine to life. May Shikhar 2024-25 inspire future engineers to explore, innovate, and lead with integrity and vision.

Civil Engg. (Hod)
TIT (Excellence)



Department of Civil Engineering

Vision of the Department

To develop technically competent and socially responsible Civil Engineering professionals with up-to-date knowledge and innovative ideas for contributing in techno and socio-economic development of the country as a whole and region in particular.

Mission of the Department

M1: To achieve academic excellence in Civil Engineering by imparting indepth technical knowledge to the students through conceptual and practical exposure on latest tools and technologies.

M2: To provide an environment & opportunity for students to grow and bring out their inherent talents for their overall development through collaborative and professional activities and prepare them for lifelong learning in global perspectives.

M3: To inculcate professional ethics, right human values and promote good communication and leadership skills in Civil Engineering students for working in interdisciplinary domain with innovative approach to address the needs of the society.

CE Glances





Department of Civil Engineering BATCH: 2024-27





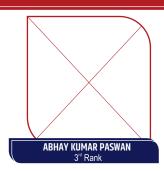
DAZZLING STARS

Academic Year 2024-2027

Final Year

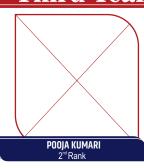






Third Year







Second Year

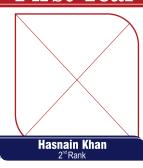






First Year









The Role of Drones in Modern Surveying and Construction

Drones have revolutionized the surveying and construction industries by offering faster, safer, and more accurate data collection. Traditionally, land surveys required extensive manual labor and time-consuming processes, but drones equipped with advanced imaging technology can capture high-resolution aerial data in a fraction of the time. This allows engineers and project managers to generate detailed 3D models, topographic maps, and site analyses with exceptional precision.

In construction, drones play a crucial role in monitoring project progress, ensuring safety compliance, and enhancing overall efficiency. Regular aerial inspections allow teams to identify potential issues early, track materials, and maintain updated records of every stage of development. This reduces delays, minimizes errors, and supports better decision-making. Additionally, drones can access difficult or hazardous



areas without endangering workers, making them invaluable for inspecting large infrastructure projects like bridges and high-rise buildings.

The integration of drone technology also reduces costs by minimizing the need for manual surveys and improving resource management. With real-time data collection, construction companies can optimize workflows and respond swiftly to on-site challenges. As drone capabilities continue to evolve, including the use of artificial intelligence and advanced sensors, their impact on modern surveying and construction is expected to grow, transforming these industries into more precise, efficient, and safer environments.

Abhinav Thakur CE, VI Sem



Merging Creativity with Environmental Responsibility

In today's world, the need to balance creativity with environmental responsibility is more urgent than ever. As climate change and resource depletion become pressing concerns, industries across the globe are

rethinking how they innovate while minimizing their environmental impact. This intersection of creativity and sustainability is driving new approaches to design, manufacturing, and everyday problem-solving.

Creative thinking plays a crucial role in finding sustainable solutions. From eco-friendly architecture and renewable energy systems to biodegradable materials and zero-waste production, innovation is transforming how we interact with the environment. Architects are designing energy-efficient buildings using recycled materials, while engineers



are developing smart technologies that reduce energy consumption. In fashion, designers are turning to organic fabrics and upcycling methods to reduce textile waste.

Digital technology also enhances this movement by offering tools for better environmental management. Through advanced simulations and data analysis, innovators can predict environmental impacts and optimize designs before production begins. Artificial intelligence and machine learning further support sustainability by improving efficiency and reducing resource consumption.

Merging creativity with environmental responsibility goes beyond technical solutions—it requires a shift in mindset. Companies are adopting circular economy principles, where products are designed to be reused, repaired, or recycled. Consumers, too, are embracing sustainable lifestyles by supporting brands that prioritize ethical practices and reducing their carbon footprints.

As the world faces ecological challenges, creative solutions that prioritize environmental responsibility are essential. By combining imaginative thinking with sustainable practices, we can shape a future where innovation thrives without compromising the planet's health. This fusion not only preserves natural resources but also inspires a new era of responsible progress for future generations.

Durgesh Badiye CE, VI Sem



Smart Cities: Where Technology Meets Urban Innovation

The concept of smart cities is transforming urban living by integrating advanced technology with city

infrastructure to improve the quality of life for residents. As urban populations grow rapidly, cities face challenges like traffic congestion, pollution, and resource management. Smart city initiatives aim to address these issues through the use of innovative technology, data analytics, and sustainable practices.



At the heart of smart cities is the Internet of Things (IoT), where devices and sensors collect real-time data to

enhance city services. Smart traffic management systems use this data to reduce congestion by optimizing traffic flow, while intelligent street lighting conserves energy by adjusting brightness based on activity levels. Waste management also benefits from smart solutions, with sensors monitoring trash levels to ensure timely collection, reducing both costs and environmental impact.

Public safety is another area where technology is making a significant impact. Surveillance systems equipped with artificial intelligence improve crime detection and emergency response. Additionally, smart grids and renewable energy sources increase energy efficiency while reducing the city's carbon footprint. Citizens benefit from smart healthcare systems, where digital platforms facilitate remote medical consultations and monitor public health trends.

One of the key aspects of smart cities is enhancing citizen engagement. Mobile applications and digital platforms allow residents to interact with local governments, access public services, and report issues in real time. This fosters transparency and community participation in decision-making processes.

Globally, cities like Singapore, Barcelona, and Tokyo are leading the way with smart initiatives that prioritize sustainability, mobility, and digital transformation. As technology continues to evolve, smart cities promise to make urban spaces more livable, efficient, and responsive to the needs of their inhabitants. The fusion of technology with urban innovation is not only shaping the cities of today but also laying the foundation for a smarter, more connected future.

Hasnain Khan, CE, VIII Sem



HOD Message Department Of Electronics & Communication Engineering

I am delighted to contribute to this year's college magazine as the Head of the Electrical and Communication Department. Our department is proud to have a long-standing history of producing talented and innovative students, and it is with great pleasure that we can showcase their work in this year's edition.

I would like to express my gratitude to the magazine team for their hard work and dedication in bringing this publication to life. Your efforts have resulted in a magazine that not only showcases the work of our department but also celebrates the diversity and creativity of our college community.

The Electrical and Communication Department has always been at the forefront of technological innovation, and this year's magazine is no exception. We are excited to share the latest research and developments in the field of electrical and communication engineering, as well as showcase the work of our students who have excelled in their academic endeavours.

Inspires you to pursue your interests and explore the world of electrical and communication engineering further.

To all our readers, I hope that this year's magazine inspires you to continue to explore your passions and to share your unique perspectives. Thank you for your continued support of our college community.

I would also like to thank our faculty members for their guidance and mentorship of our students. Their efforts in teaching and research have played a vital role in shaping the careers of our students and the overall success of our department.

ECE (HOD)
TIT (Excellence)



Department of Electronics and Communication Engineering

Vision of the Department

To become a "centre of excellence" in the field of Electronics and Communication Engineering by transforming the students into competent professionals with high ethical values and fulfilling societal needs.

Mission of the Department

- M.1: To create an academic ambience for achieving academic excellence and producing competent graduates through effective teaching learning process.
- M.2: To provide exposure of modern tools and cutting edge technologies in the field of Electronics and Communication Engineering.
- M.3: To develop adequate and appropriate facilities and provide environment to stimulate multidisciplinary interaction.
- M.4: To enhance employability by inculcating problem solving abilities, team spirit, leadership qualities and professional ethics.

ECE Glances





Department of Electronics & Communication Engineering BATCH: 2020-24





DAZZLING STARS

Academic Year 2024 - 2027

Final Year







Third Year







Second Year







First Year









Internet of Everything: A Connected World in the Digital Renaissance

The Internet of Everything (IoE) represents a new era where people, processes, data, and things are seamlessly connected. It extends beyond the Internet of Things (IoT) by integrating human and digital interactions, enhancing how we live and work. In the digital renaissance, IoE is transforming industries,

from smart homes and intelligent transportation to advanced healthcare and industrial automation.

At the core of IoE is the ability to gather and analyze data in real time, allowing for smarter decision-making. For instance, smart cities use connected sensors to monitor traffic flow, manage energy consumption, and improve public safety. In healthcare, wearable devices track



patient health and enable remote monitoring, providing faster and more personalized care. Even agriculture is being revolutionized through IoE, with smart irrigation systems optimizing water usage based on real-time weather data.

The power of IoE lies in its ability to bridge the physical and digital worlds. This fusion not only improves operational efficiency but also fosters innovation in areas like artificial intelligence and machine learning. As technology continues to evolve, the Internet of Everything will play a crucial role in shaping a more connected, intelligent, and responsive world, bringing the digital renaissance to every aspect of our lives.

Sandeep Kumar Shukla EC, VI Sem



AI in Signal Processing: Enhancing Digital Communication Systems

Artificial intelligence (AI) is revolutionizing signal processing, transforming how digital communication systems operate. In an age where data transmission is vital, AI enhances efficiency, accuracy, and speed. Traditional signal processing methods rely on mathematical models, but AI-driven techniques offer dynamic adaptability and real-time analysis, improving performance across various communication platforms.

AI algorithms play a key role in optimizing signal compression and noise reduction. This ensures clearer audio, faster data transmission, and improved video streaming. For instance, in wireless communication, AI enhances signal detection and interference management, allowing networks to deliver better quality even in congested environments. Advanced machine learning models can predict and correct transmission errors, improving the reliability of data exchange.

Another breakthrough is the use of AI in 5G and upcoming 6G technologies. AI-powered systems

Digital Signal Processing System

SENSOR

- Anti-Aliasing Filter

DIGITAL SIGNAL PROCESSOR

DIGITAL PROCESSOR

ACTUATOR

LOW-PASS FILTER

LOW-PASS FILTER

LOW-PASS FILTER

LOW-PASS FILTER

dynamically allocate bandwidth and manage traffic, ensuring seamless connectivity for billions of devices worldwide. In applications like satellite communication, AI enhances image resolution and data interpretation, providing more accurate geographic and environmental information.

As AI continues to evolve, its integration with signal processing will drive the next generation of communication technologies. This collaboration is shaping a future where digital communication is faster, smarter, and more efficient, transforming how we connect with the world.

Gagan Sonpure EC, IV Sem



Nanoelectronics: Where Creativity Meets Atomic Precision

Nanoelectronics is the frontier where creativity meets atomic precision, pushing the limits of technology at the nanoscale. It involves designing and fabricating electronic components smaller than 100 nanometers,

allowing faster, more efficient, and more powerful devices. This field is shaping innovations in computing, medicine, and renewable energy, redefining technological possibilities.

One of the most significant breakthroughs in nanoelectronics is the development of transistors on the atomic scale. These transistors form the foundation of microprocessors, enabling faster computing while consuming less power. Quantum



dots and nanowires are also transforming electronics by enhancing the performance of sensors and optical devices. In medicine, nanoelectronic biosensors detect diseases at an early stage with unparalleled accuracy, offering new possibilities for personalized healthcare.

Nanoelectronics is also driving progress in energy storage and efficiency. Nanomaterials are used in advanced batteries and supercapacitors, enabling faster charging and longer-lasting energy storage. In renewable energy, nanostructures improve solar cell efficiency, making clean energy more accessible and sustainable.

The fusion of creativity and atomic precision opens endless possibilities for future technologies. As research advances, nanoelectronics will continue to shape a world where devices become smaller, faster, and smarter, unlocking new horizons across industries.

Pooja Namdev EC, IV Sem

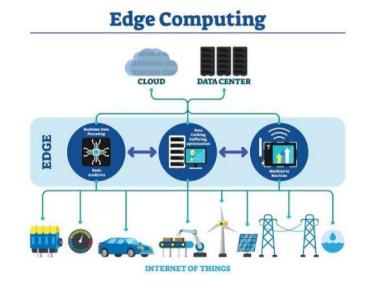


Edge Computing: The Future of Real-Time Data Processing

Edge computing is transforming the way data is processed by bringing computation closer to the source of data generation. Unlike traditional cloud computing, which relies on

centralized data centers, edge computing performs calculations locally, enabling faster responses and real-time analysis. This shift is crucial for applications that demand low latency and high reliability, such as autonomous vehicles, smart cities, and industrial automation.

The rise of the Internet of Things (IoT) has accelerated the adoption of edge computing. Devices like



sensors, smart cameras, and connected machines generate massive amounts of data. Edge computing processes this information locally, reducing the need to transfer large datasets to distant servers. This not only decreases latency but also enhances security by minimizing data exposure.

In healthcare, edge computing powers remote patient monitoring, allowing real-time analysis of vital signs without relying on external networks. Similarly, in smart cities, it enables immediate traffic management and environmental monitoring, improving urban life. Autonomous vehicles rely on edge computing for instant decision-making, ensuring safe and efficient navigation.

As the demand for real-time data grows, edge computing is becoming a cornerstone of modern digital systems. By reducing delays and improving efficiency, it is paving the way for smarter, more responsive technologies that enhance our daily lives and industrial processes.

Vikas Sahu EC, IV Sem



Revolutionizing Healthcare with Digital Bioelectronics

Digital bioelectronics is revolutionizing healthcare by combining advanced electronics with biological systems to diagnose, monitor, and treat medical conditions. This interdisciplinary

field is transforming patient care through innovations like wearable devices, implantable sensors, and personalized treatment systems.

Wearable bioelectronic devices, such as smartwatches and fitness trackers, monitor vital signs like heart rate, oxygen levels, and sleep patterns. These devices provide continuous health data, allowing



early detection of potential medical issues. Implantable sensors go a step further, offering real-time monitoring of chronic conditions such as diabetes and cardiovascular diseases. These technologies enhance patient care by providing precise, continuous insights without the need for frequent hospital visits.

Digital bioelectronics also play a critical role in neuroprosthetics, where electronic implants restore lost sensory or motor functions. For instance, cochlear implants enable hearing for individuals with severe hearing loss, while brain-computer interfaces (BCIs) help patients with paralysis regain control over external devices. These breakthroughs are expanding possibilities for restoring and enhancing human capabilities.

In therapeutic applications, bioelectronic devices are used to deliver targeted treatments. Electrical stimulation therapies, for instance, are being developed to manage chronic pain and treat neurological disorders like epilepsy. As digital bioelectronics continue to evolve, they hold the promise of transforming healthcare by enabling personalized medicine, improving patient outcomes, and offering new ways to interact with biological systems.

Priyanka Kumari EC, VI Sem



HOD Message

Department of Mechanical Engineering

It is a proud moment for the Department of Mechanical Engineering to be a part of Shikhar 2024-25, a platform that reflects the talent, creativity, and technical excellence of our students. This magazine is not just a collection of ideas but a testament to the hard work and innovative spirit that drives our department forward.

Mechanical Engineering is the backbone of modern industry, constantly evolving to meet the demands of technological advancements and sustainable development. Our department is dedicated to equipping students with a strong foundation in core concepts while encouraging them to explore new technologies and interdisciplinary approaches. Through a blend of academic rigor, hands-on experience, and industry collaboration, we aim to nurture future engineers who are ready to tackle real-world challenges.

I commend the editorial team and all the contributors for their efforts in bringing this edition to life. May Shikhar 2024-25 continue to inspire and motivate our students to push the boundaries of innovation and excellence.

ME (HOD)
TIT (Excellence)



Department of Mechanical Engineering

Vision of the Department

To develop technically competent, intellectually adept and socially responsible mechanical engineering graduates possessing research aptitude and global competency who can contribute in technological and socioeconomic development of the nation.

Mission of the Department

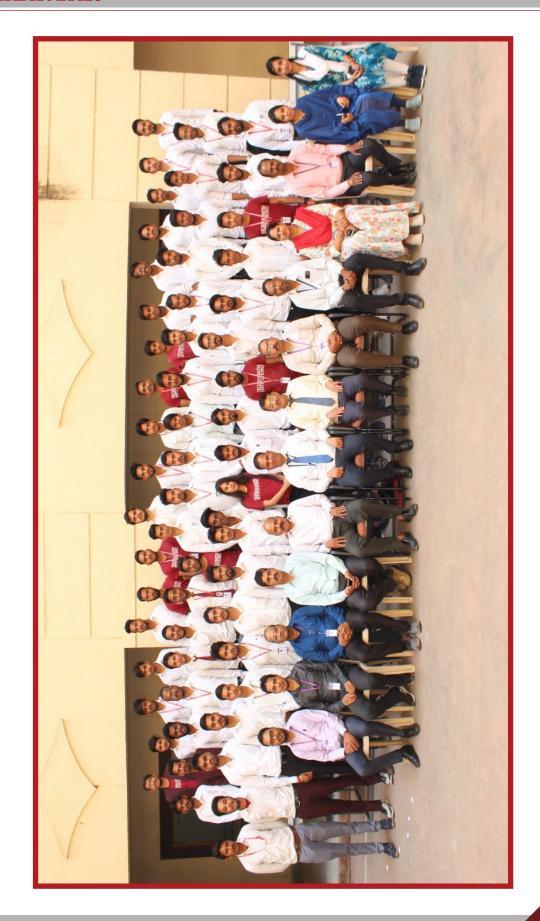
- M.1: To create an academic ambience for achieving academic excellence by imparting in-depth domain knowledge to the students through effective teaching learning and practical exposure for latest tools and technologies.
- M.2: To provide an environment and opportunity for the students to carry out innovative solutions of technical issues through research and also to promote them for higher studies.
- M.3: To develop entrepreneurship skills amongst students so as to become ethical and socially responsible entrepreneurs capable to fulfil the needs of society considering global challenges.

ME Glances





Department of Mechanical Engineering BATCH: 2020-24





DAZZLING STARS

Academic Year 2024-2027

Final Year



Mohd Sartaj Bania 2[™]Rank



Third Year







Second Year







First Year









Sustainable Manufacturing

Sustainable manufacturing is reshaping industries by integrating advanced technology to reduce environmental impact while maintaining efficiency. As global concerns about climate change grow, manufacturers are adopting eco-friendly practices that minimize waste, conserve resources, and lower emissions. This transformation is powered by cutting-edge

technologies like automation, digital twins, and renewable energy integration.

One of the key drivers of sustainable manufacturing is the use of smart factories equipped with Internet of Things (IoT) devices. These



interconnected systems monitor and optimize energy consumption in real-time, reducing waste and improving production efficiency. Additive manufacturing, or 3D printing, also plays a crucial role by minimizing material waste and enabling the production of complex components with fewer resources.

Recycling and circular economy practices further enhance sustainability by repurposing materials and extending product life cycles. Technologies like advanced robotics and artificial intelligence (AI) streamline these processes, ensuring minimal human intervention and maximum precision. Companies are also adopting renewable energy sources such as solar and wind to power manufacturing plants, reducing reliance on fossil fuels.

Sustainable manufacturing is not just about reducing environmental impact—it also improves operational efficiency and enhances brand value. As technology continues to evolve, the fusion of innovation with eco-conscious practices is shaping a future where industries can thrive while preserving the planet for future generations.

Mayank Sen ME, IV Sem



Transforming Mechanical Innovation Processes

Virtual prototyping is revolutionizing the mechanical engineering industry by allowing designers to create and test digital models before physical production. This advanced

technology speeds up innovation, reduces costs, and enhances product performance through simulation and analysis. By using computer-aided design (CAD) software and virtual reality (VR), engineers can visualize, modify, and optimize their creations with remarkable precision.

One of the most significant advantages of virtual prototyping is



the ability to identify design flaws early in the development process. Through detailed



simulations, engineers can test mechanical components under various conditions, such as stress, heat, and motion, without needing physical prototypes. This reduces material waste and accelerates the product development cycle, saving both time and resources.

Virtual prototyping is also transforming the automotive and aerospace industries. Engineers can simulate aerodynamic performance, crash scenarios, and mechanical fatigue, ensuring safer and more efficient

designs. In manufacturing, it enables the creation of complex machinery and systems with minimal risk, as every detail can be refined digitally before production begins.

As technology advances, virtual prototyping is becoming even more immersive with augmented reality (AR) and AI integration. This digital-first approach enhances creativity, improves collaboration, and allows mechanical engineers to push the boundaries of innovation while maintaining precision and efficiency.

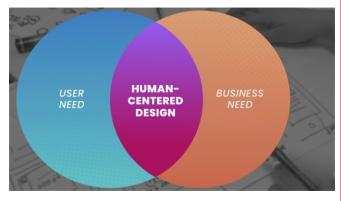
Akshat Kumar Gupta ME, VI Sem



Human-Centered Engineering: Designing with Creativity and Empathy

Human-centered engineering places people at the core of the design process, focusing on creating solutions that meet real human needs. This approach blends technical expertise with creativity and empathy, ensuring that engineering innovations improve lives in practical and meaningful ways. From medical devices to consumer products, human-centered design is shaping how engineers address societal challenges.

At the heart of human-centered engineering is the commitment to understanding user experiences. Engineers conduct extensive research to identify user pain points and design solutions that prioritize safety, accessibility, and ease of use. For example, in assistive technology, engineers design prosthetics and mobility aids tailored to individual needs, empowering users to lead independent lives.



This approach extends to sustainable infrastructure as well. Engineers design smart cities with human well-being in mind—creating efficient transportation systems, accessible public spaces, and sustainable energy solutions. In healthcare, human-centered engineering drives innovations like patient-friendly diagnostic devices and telemedicine platforms that provide equitable access to care.

The integration of empathy into engineering fosters innovation that not only meets technical requirements but also resonates with the people who use these solutions. By focusing on the human experience, engineers are redefining the future—where technology serves humanity with compassion, creativity, and purpose.

Vikash Kumar ME, VI Sem



Head of Department's Message –

Electrical & Electronics Engineering

It gives me great pleasure to be a part of Shikhar 2024-25, a magazine that reflects the creativity, technical prowess, and achievements of our students. This publication is a testament to the dedication and innovative mindset that defines the Department of Electrical and Electronics Engineering.

In an era where technology is advancing at an unprecedented pace, Electrical and Electronics Engineering plays a critical role in shaping the future. Our department is committed to providing a comprehensive education that blends theoretical knowledge with practical applications. Through industry collaborations, hands-on projects, and research initiatives, we prepare our students to meet global challenges and contribute to technological progress.

I extend my sincere appreciation to the editorial team and all contributors for their efforts in bringing this magazine to life. May Shikhar 2024-25 inspire and motivate our students to continue exploring new ideas and pushing the boundaries of innovation.

Head of Department, Electrical and Electronics Engineering

EE (HOD)TIT (Excellence)



Department of Electrical Engineering

Vision of the Department

To impart quality education in various fields of engineering, technology & management and to develop the institute into a centre of academic excellence.

Mission of the Department

To mould the students into competent technocrats to become professionally skilled, intellectually adept, and socially responsible, to contribute to the society through quality teaching and providing the conducive learning environment.

EE Glances





Department of Electrical Engineering BATCH: 2020-24





DAZZLING STARS

Academic Year 2024-2027

Final Year







Third Year







Second Year







First Year









Future of Robotics: Mechanical Precision Meets Digital Intelligence

The future of robotics lies at the intersection of mechanical precision and digital intelligence, where advanced machines are becoming smarter, faster, and more adaptable. Robotics has evolved from simple automated

tasks to intelligent systems capable of learning, decision-making, and interacting with humans in complex environments. This convergence of mechanical engineering and artificial intelligence (AI) is transforming industries and redefining possibilities.

Modern robots integrate sophisticated sensors, realtime data analysis, and machine learning algorithms to perform tasks with remarkable accuracy. In



manufacturing, collaborative robots (cobots) work alongside humans, handling repetitive tasks while improving productivity and safety. These robots can adapt to changes in their environment, making them invaluable in industries requiring high precision and flexibility.

The medical field is also witnessing a robotics revolution. Surgical robots assist doctors in performing minimally invasive procedures with greater accuracy, reducing patient recovery times. In agriculture, autonomous robots handle planting, monitoring, and harvesting, optimizing resource use while reducing human labor. Additionally, search-and-rescue robots equipped with AI navigate hazardous environments to save lives during natural disasters.

As technology advances, the future of robotics will continue to blur the line between physical and digital intelligence. From self-learning robots to human-robot collaboration, this fusion is paving the way for a world where intelligent machines enhance every aspect of human life while pushing the boundaries of innovation.

Praveen ME, VIII Sem



Digital Sensors: Bridging the Physical and Virtual Worlds

Digital sensors are at the heart of modern technology, seamlessly connecting the physical world with the digital realm. These devices capture real-world data—such as temperature, pressure, motion, and light—and convert it into digital signals that computers and smart

systems can analyze and act upon. With the rise of the Internet of Things (IoT), artificial intelligence (AI), and smart devices, digital sensors are revolutionizing industries ranging from healthcare to manufacturing.

In healthcare, wearable sensors monitor vital signs, enabling early detection of medical conditions and real-time health tracking. Smart cities rely on sensors for traffic management, pollution monitoring,



and efficient energy usage. In industrial automation, digital sensors enhance precision, optimize production, and reduce waste. These sensors also play a critical role in augmented reality (AR) and virtual reality (VR) applications, making digital experiences more immersive.

As sensor technology advances, the fusion of physical and virtual worlds is becoming more sophisticated. High-speed connectivity, AI-powered data analytics, and miniaturized sensors are creating a future where real-time insights drive smarter decisions, improving efficiency and quality of life across multiple domains.



Green Energy Technologies in the Age of Digital Transformation

The global shift towards sustainability is being accelerated by digital transformation, with green energy technologies playing a crucial role in reducing carbon footprints and ensuring a cleaner future. Innovations in renewable energy, such as solar and wind power, are now integrating digital technologies like AI, IoT, and

big data analytics to optimize efficiency and performance.

Smart grids use real-time data to balance energy supply and demand, ensuring maximum efficiency in power distribution. AI-driven predictive maintenance minimizes downtime for wind turbines and solar panels, extending their operational lifespan. Additionally, blockchain technology is revolutionizing energy transactions, enabling peer-to-peer energy trading where



consumers can buy and sell excess renewable energy directly.

The fusion of digital transformation and green energy is also evident in energy storage solutions. Advanced battery technologies and AI-driven energy management systems are making renewable energy more reliable by addressing intermittency challenges. As digital tools continue to enhance renewable energy systems, the path to a sustainable, low-carbon future is becoming more achievable and efficient.



Electric Vehicles: Fusing Technology and Sustainability

Electric vehicles (EVs) are transforming the automotive industry by combining technological innovation with environmental responsibility. Unlike conventional vehicles, EVs produce zero tailpipe emissions, making them a key solution in reducing air pollution and combating climate change. With advancements in battery technology, AI-driven energy management, and smart charging infrastructure, EVs are becoming more efficient and accessible



The integration of AI and IoT allows EVs to optimize energy consumption and improve battery longevity. Smart navigation systems analyze traffic patterns to suggest the most energy-efficient routes, while regenerative braking systems convert kinetic energy into stored power, enhancing overall efficiency. Wireless and ultra-fast charging technologies are also making EVs more convenient, reducing charging times significantly.

Governments and industries are investing heavily in EV infrastructure, promoting widespread adoption through incentives and policy support. As technology continues to evolve, electric vehicles will play a pivotal role in shaping a cleaner, smarter, and more sustainable transportation ecosystem.



Energy Harvesting: Capturing Power from the Environment

Energy harvesting is an emerging technology that captures and converts ambient energy from the environment into usable power. This process taps into renewable sources such as solar, wind, thermal, and

kinetic energy, enabling self-sustaining electronic devices and systems. With the rise of IoT and wireless sensor networks, energy harvesting is gaining prominence in making devices more autonomous and energy-efficient.

Solar energy remains one of the most widely used harvesting methods, powering everything from satellites to consumer electronics. Piezoelectric materials convert mechanical stress into electrical energy, making them ideal for wearable devices and industrial sensors. Thermoelectric



generators harvest heat energy from machines and human bodies, providing sustainable power for remote applications.

The miniaturization of energy harvesting devices and advancements in nanotechnology are expanding their applications in healthcare, smart cities, and environmental monitoring. As technology advances, energy harvesting is paving the way for a future where electronic systems function with minimal reliance on conventional power sources, contributing to a more sustainable and energy-efficient world.



Digital Control Systems: Shaping the Future of Automation

Digital control systems are the backbone of modern automation, driving efficiency and precision in industries ranging from manufacturing to transportation. These systems use advanced computing algorithms, real-time data processing, and AI-driven decision-making

to optimize complex processes with minimal human intervention.

In industrial automation, programmable logic controllers (PLCs) and distributed control systems (DCS) ensure seamless operation of machinery, reducing errors and improving productivity. Smart factories leverage IoT-connected control systems to monitor and



adjust production in real-time, enhancing efficiency and minimizing waste.

Digital control systems are also transforming transportation with intelligent traffic management, autonomous vehicles, and smart railway networks. In aerospace and defense, these systems enable precise control of drones, satellites, and military equipment. The integration of AI and machine learning further enhances their capabilities, allowing for predictive maintenance and adaptive control.

As automation continues to evolve, digital control systems will remain at the forefront of technological advancement, shaping industries and revolutionizing the way machines interact with the digital world.



Faculty Bytes



Prof. Priyanka Dwivedi

Prof. Arjun Rajput

"Embrace every challenge as an opportunity to improve and never stop exploring new horizons."



"True learning happens when you go beyond textbooks. Engage with real-world problems, seek solutions, and let curiosity be your guide toward innovation."

Dr. Dhirendra Shukla

Prof. Priya Patel



"Education is not just about acquiring degrees—it's about empowering yourself to shape the future. Keep learning, questioning, and growing every day."

"Your dreams are valid only when you work hard to achieve them. Set ambitious goals, remain focused, and remember—nothing is impossible if you give it your best."



Faculty Bytes



Dr. Sibi Jose

Prof. Praveen Singh

"Success is not about talent alone it is about persistence. Keep working hard, stay patient, and trust the process. Your dedication will eventually pay off."



"Great innovations come from those who dare to think differently. Challenge the norms, embrace creativity, and make a positive impact on the world."

Dr. Archana Morrinson

Prof. Avadhesh Shakya

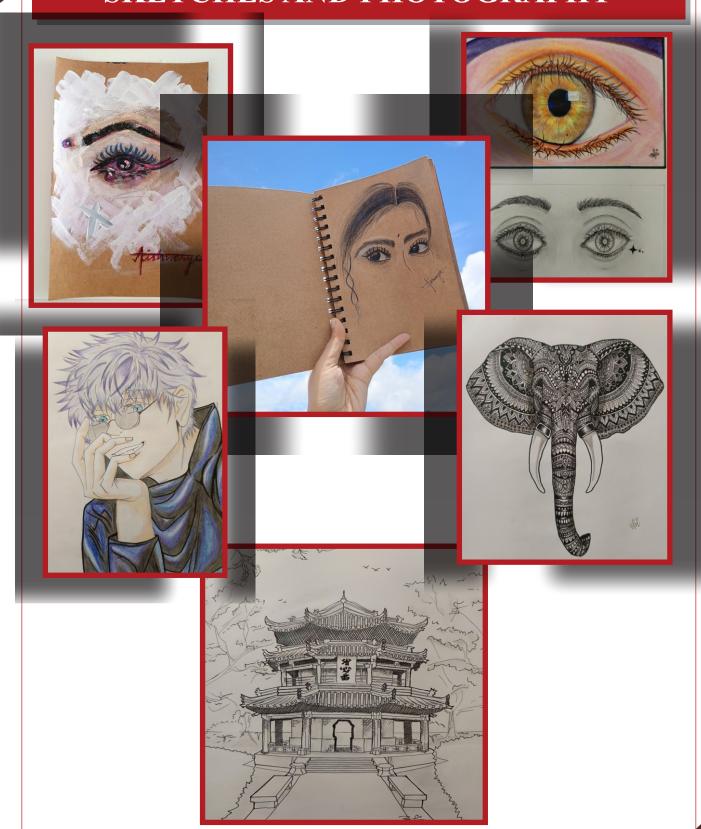


"The world needs thinkers, doers, and change-makers. Believe in your ability to make a difference—because every small step you take creates a ripple of transformation."

"Fail, Learn, Rise... Every mistake teaches a lesson, and every lesson makes you stronger. Keep moving forward with determination."



SKETCHES AND PHOTOGRAPHY





भोपाल सिटी भास्कर 10-05-2023

निकिता के डांस नंबर्स पर

थिरके फ्यूचर इंजीनियर्स

सिटी रिपोर्टर| नाच मेरी रानी', 'बुर्ज खलीफा', 'तेरे प्यार में', 'आओ कभी हवेली पे'जैसे डांस नंबर्स

को प्लेबैक सिंगर निकिता गांधी ने टेक्नोक्रेट्स इंस्टीट्यूट कैंपस में हुए कॉन्सर्ट में सुनाएं, इस

पर प्यूचर्स इंजीनियर्स जमकर थिरके। बैंड में

कीबोर्ड पर कुशल मंगल और ड्रम पर राहुल

मुरलीधर की जुगलबंदी भी हुई। यहां समूह के मुख्य संरक्षक डॉ. आरआर करसौलिया, चेयरपर्सन साधना करसौलिया, एमडी डॉ. सुरिंग करसौलिया, वाइस

चेयरमैन और सौरभ करसौलिया भी मौजूद थे।

म प्रातभागिया का आखा स आसू भा ानकल आर हसा क ठहाक भा लग।

NEWSFLASH

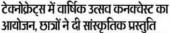
भोपाल 30-01-2023

टेक्नोक्रेट्स और IIT रूड्की के बीच MOU

टेप्लोफेट्स और III रुड़की के बीच MOU
भेपाल आईआईट रूज़की और मध्य भारत क्षेत्र के उल्लंट तकनेकी
संस्थान टेक्लोफेट्स समूढ़ के साथ एमओप हस्ताक्षर हुए। एमओप के ततत
हैं ते संस्थान संयुक्त रुख से
टेक्लाप्तिओं आन्त्रप्रन्यतिथा,
रुटाटेअप एवं इनक्कृत्वरन
के में कमा करेंगे। एमओप
टेक्लोफेट्स समूढ़ को ओर से
जेकेल दिवेरी डावरेकट एवं
प्रोफेसर निम्चल को ओर से
जेफेसर निम्चल को मेश स्त्राप्त अत्राप्त हुए। अहंआईटी कड़की
के सीईओ-टीआईडीएस आजम खान के बीच हुआ। आईआईटी कड़की
के सीईओ-टीआईडीएस आजम खान के बीच हुआ। आईआईटी कड़की
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के सीईओ-टीआईडीएस आजम खान के बीच हुआ। आईआईटी कड़की
के सीईओ-टीआईडीएस सामु स्त्रम्य से आपना करानिया, अन्तरम्य पर टक्नोफेट्स
समूह को माननीय अध्यक्ष अपनी सामुग स्त्रम्य से जीव खान करते
समूह की माननीय अध्यक्ष अपनी सामुग स्त्रम्य से प्राव्या को पांठ खाड़ का स्त्रम्य समूह स्त्रम्य को उल्लंकियों को पांठ खाड़ कर समूह



भोपाल 01-03-2023



भोपाल। टेक्नोक्रेट्स इन्टरनेशनल स्कूल में वार्षिक उत्सव कनक्वेस्ट का आयोजन किया गया। इस दौरान छात्रों ने रंगारंग कार्यक्रम प्रस्तुत कर

सबको मंत्रमुग्ध कर दिया। कार्यक्रम में मुख्य अतिथि विधानसभा अध्यक्ष गिरीष गौतम उपस्थित थे। उन्होंने अपने वक्तव्य में कहा कि अध्छी शिक्षा एवं संस्कार ही जीवन को एक नया रूप देते हैं। इस दौरान बच्चों ने



रंगारंग कार्यक्रम प्रस्तुत किए जिसमें समृह नृत्य एवं नाटिका के माध्यम से कोरोना महामारी पर विजय प्राप्त की को प्रस्तुत किया। इस अवसर पर टेक्नोक्रेटस समूह की अध्यक्ष साधना करसौलिया ने कहा कि छात्रों में छिपी हुई प्रतिभा एैसे कार्यक्रमों से ही सामने आती है।



भोपाल 12-05-2023

दैनिक भारकर

दैनिक भारकर

भोपाल 06-06-2024

टेक्नोक्रेट्स में अचीवर्स एण्ड एनुअल-डे समारोह में हुए सांस्कृतिक कार्यक्रम

भोपाल अपने पेशेवर जीवन में व्यस्तताओं के बीच में अपने माता-पिता और गुरुजनों का आदर एवं सम्मान करना कभी नहीं भूले। आज आप जिस

जगह पर पहुंचे हैं, ये आपके माता-पिता और गुरुजनों की बदौलत संभव



नगुष्क पटत न टक्काक्रट्स पुर जारन इस्टिट्यूट में एक्सिमेंट अजीवसे एण्ड एनुअल डे-2023 समारोह में संबोधित करते हुए कहीं। समारोह में विद्यार्थियों ह्वारा सांस्कृतिक कार्यक्रम प्रस्तुत किए गए। इस मौके पर राज्यपाल ने छात्रों को सम्मानित भी किया। इस कार्यक्रम में ग्रामीण विकास एवं इस्पात राज्यमंत्री फरागन सिंह कुरसर्ते, आरजीयोजी के वाइस चांसलर डॉ. सुनील कुमार, बक्कउरल्लाह यूनिवर्मिटी के वाइस चांसलर डॉ. सुनील कुमार, मुख्य संरक्षक डॉ. आर.आर. करसोलिया, एम.डो. डॉ. सुर्फी करसोलिया और वाइस चेंसफेन सीरफ करसोलिया उपस्थित थे।

टेवनोक्रेट्स छात्रों के बीच पहुंची अभिनेत्री रवीना टंडन और अभिनेता अरबाज खान

भोपाल। बॉलीवुड अभिनेत्री खीना टंडन और अभिनेता अखाज खान टेक्नोक्रेट्स इंस्टीट्यूट ऑफ टैक्नोलॉजी(टीआईटी)में छात्रों से मिलने

पहुंचे। रवीना टंडन ने समूह के प्रांगण में आयोजित कार्यक्रम में छात्रों से कहा कि आपका जोश देखकर मुझे अपने स्टूडेन्ट लाइफ की याद आ गई। उन्होंने कहा कि जिस प्रकार आपका जोश



देखा वह देखने लायक है। रवीना ने छात्रों को फूल देकर उत्साहवर्धन किया। वहीं, अरबाज खान ने छात्रों को शिक्षा के साथ-साथ अपने आपको सर्वांगीण विकास पर भी जोर देने की बात की।

भोपाल 22-07-2024

टेक्नोक्रेट्स ने मनाया आजादी का अमृत महोत्सव

दैनिक भारकर

भोपाल | टेक्नोक्रेटस समृह ने आजादी का 75वां महोत्सव बडे हर्षोउल्लास के साथ मनाते हुए नए विचारों का

आत्मनिर्भरता का अमृत के रूप में आत्मसात किया। संस्थान के मख्य संरक्षक डॉ. रामरज करसोलिया ने ध्वजारोहण किया। इसके बाद एनसीसी कैडेट द्वारा मार्चपास्ट किया



गया, परेड का निरीक्षण संस्था की अध्यक्षा साधना करसोलिया ने किया और फिर परेड की सलामी ली। संस्थान के प्रबंधकगण एवं उपस्थित समस्त सदस्यों द्वारा तिरंगा रैली निकाली गई। रक्तदान व स्वास्थ शिविर लगाया गया।

टीआईटी टेक्नोक्रेट्स ग्रुप सम्मानित

भोपाल। टीआईटी टेक्नोक्रेट्स ग्रुप ऑफ इंस्टीट्यूशंस को एसोसिएटेड चेंबर ऑफ कॉमर्स एंड इंडस्ट्री द्वारा आयोजित एजुकेशनल मीट 2024 में

बेस्ट प्लेसमेंट इन सेंट्रल इंडिया के अवॉर्ड से सम्मानित किया गया। कोलकाता में आयोजित समारोह ात्रत सरकार क शिक्षा राज्य मंत्री डॉक्टर सुकात मजुमदार ने यह अवॉर्ड प्रदान किया। संस्था के वाटम नेगारी



के वाइस चेयरमैन सौरभ करसोलिया ने कहा कि हम सभी इस अवॉर्ड को हासिल करने पर रोमांचित हैं। यह अवॉर्ड उत्कृष्टता के हमारे अथक प्रयास और युवाओं के भविष्य को आकार देने की हमारी प्रतिबद्धता का परिणाम है।



भोपाल 20-06-2024

CITY PLUS

टीआईटी में प्लेसमेंट डे आयोजित

टीआइटी में प्लेसमें अंध्रासा | टेक्नोइंट्स इंटिट्सूट अर्थक टेक्नोलीजी (टीआइटी) में प्लेसमें हैं दे 2003 कार्यक्रिक से प्रतिकृति के प्र



अस्तर होता है, तो सभी प्रसल होते हैं और आज इन्द्र देखता भी प्रसल होला प्रसल होते हों प्रसल होते हैं जो के स्थान हैं जो के स्थान हैं जो के स्थान हैं प्रस्तान प्रदेश में एके प्रस्ति के आज प्रभान प्रदेश में एके प्रमित्त के आज प्रभान प्रदेश भजीव्यों को द्वारत प्रदेश अजीव्यों को द्वारत प्रदेश अजीव्यों को द्वारत प्रदेश पर विद्यालियों में स्थानहरूकिक रंगारंग कार्यक्रम प्रस्तुत किए।

भोपाल 12-05-2023

टेक्नोक्रेट्स में अचीवर्स एण्ड एनुअल-डे समारोह में हुए सांस्कृतिक कार्यक्रम



समारोह में हुए सांस्कृतिक कार्यक्रम भोषात। अपने परेशवर जीवन में व्यस्तताओं के बीच में अपने माता-पिता और गुरुजाने का आदर एवं सम्मान करता कमी नहीं भूते। आज आप जिस जगाड पर पहुंचे हैं, ये आपके माता-शिता और गुरुजनों को बलेहल समय हो पाया है। उत्कृत्यता कौराल में नहीं इंटिन्कोंण में होती है। ये बात उच्चपाय मंगूबाई प्रेटन हैं टेक्कोक्ट्रस पूर्ण आप इंटीट्यूट में 'प्लेसमेंट अजीवास पुण्ड प्रचुलल के 2023 समारोह में संबोधित करते हुए कही। समारोह में विद्यार्थियों द्वारा सांस्कृतिक कार्यक्रम प्रस्तुत किए गए। इस मोके पर राज्यपात ने छाजे को सम्मातिन थी किया इस कार्यक्रम में यागीण किस्ता एवं इसारा राज्यमंत्री फणान धिंह कुलाते, आरजीपीयों के बाइस चांसलर डॉ. सुनील कुमार, बस्कतउन्लाह यूनिवासिंटी के बाइस चांसलर डॉ. एस.के.जैन, संस्था मुख्य संख्यक डॉ. अर.आर. करसोलिया, पन.डॉ. डॉ. सुर्पीप करसोलिया और वाइस चेयरमैन सीरभ करसोलिया वार्यस्थत थे।

टीआईटी में 'ग्रेजुएशन सेरेमनी' आयोजित

भोषाल | टीआईटी टेक्नोक्रेट्स ग्रुप ऑफ इंस्टीट्यूशंस ने 'ग्रेजुएशन सेरेमनी 2K24' की मेजबानी की। 'ग्रेजुएशन सेरेमनी 2K24' स्नातक छात्रों की

शैक्षणिक उपलब्धियों का जरन ुद्धा रूप स राजीय गांधी प्रौद्योगिकी विराजीविद्यालय के कुलावित डॉ. रूपम गुरता, ग्रुप को अध्यक्षा साधना करसोलिया और मुख्य संस्थक डॉ. रामराज करसोलिया ज्यानिया



डॉ. रामराज करसोलिया उपस्थित थे। इस अवसर पर उत्कृष्ट छात्रों को उपलब्धियों के लिए मान्यता दी गई। शैक्षणिक यात्रा के दौरान उत्कृष्टता और समर्पण का प्रदर्शन करने वाले स्टूडेंट्स को सम्मानित किया गया। टीआईटी टेक्नोक्रेट्स ग्रुप रजत जयंती वर्ष मना रहा है।



भोपाल 11-01-2024

अनुशासन, समर्पण एवं निरंतर प्रयास लक्ष्य प्राप्ति की कुंजी : चावला

भोपाल। टेक्नोक्रेट्स ग्रुप में द अबाउन्ड के डायरेक्टर (बिजनेस रिलेशन) प्रभदीप चावला का व्याख्यान आयोजित किया गया। इस मौके पर वे छात्रों

से रूबरू हए। व्याख्यान में चावला ने कंटिन्यु लर्निंग के महत्व को समझाया और आज के इस प्रतियोगिता के दौर में चुनौतियों का सामना कर कैसे अपना विकास किया जाता है, जैसे विषय पर



जानकारी दी। उन्होंने कहा कि एवरी फेल्युअर इज से पिलर ऑफ सक्सेस। चालवा ने छात्रों से कहा कि अनुशासन, समर्पण एवं निरन्तर प्रयास ही लक्ष्य प्राप्ति की कुंजी है। चावला स्टेनफोर्ड यूनिवर्सिटी के पूर्व छात्र एवं टेक्नोक्रेट्स ग्रुप के वाइस चेयरमैन सौरभ करसौलिया के जूनियर है।

वैनिक भारकर

टेक्नोक्रेट्स छात्रों के बीच पहुंची अभिनेत्री रवीना टंडन और अभिनेता अरबाज खान

पाया CS-9 आर आगनारा आर बाज प्रेमित स्थान है अप अभिनेता अरबाज खान देश्यें है स्थान टेंडन और अभिनेता अरबाज खान टेंडनकेट्स स्टेंटस्पर अफ टेंडनेलिकी(टोंग्स्टि)में छात्रों से सिलने पूर्वेच (सीना टेंडन ने समुह के प्राची के अप क

किया। वहीं, अरबाज खान ने छात्रों को शिक्षा के साथ-साथ अपने आपको सर्वागीण विकास पर भी जोर देने की बात की।

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