







ANNUAL REPORT

Part 1

2023-24 (Financial Year)







CONTENTS

05
From the desk of the Founding Chancellor

07

From the desk of the Founding Vice Chancellor

09

From the desk of the Chair of Board of Trustees

11 About Plaksha

19 Key Statistics

21 Academic Programs

- From the desk of Dean Academics
- 25 Undergraduate Program
- 33 Tech Leaders Fellowship
- 37 Doctoral Program
- 39 Young Technology Scholars

41 Life at Plaksha

- 43 Student Achievements
- 47 Student Life
- 51 Student Hubs
- 55 Diversity, Equity & Inclusion
- 59 Financial Aid

61 Career Advancement

- 63 Office of Corporate Partnerships & Careers
- 67 Office of Global Engagements
- 71 Info Edge Center for Entrepreneurship

75 Research Ecosystem

- From the desk of Dean Research
- 79 Research Centers
- 85 Research Labs & Facilities

97 University Governance

01

Plaksha reflects the idea of the university as a tree from which a river of learning flows endlessly, nourishing everything it touches. Indian scriptures state that River Saraswati, synonymous with learning, originated from a 'world-tree' called PLAKSHA, which grows at the foothills of the Sivaliks.



Scan to explore Plaksha's journey





From the desk of the Founding Chancellor

We live in a world of rapid technological, scientific and business model changes. The pace of discoveries is being accelerated by artificial intelligence (AI) and machine learning (ML). Whole industry sectors are being created to take advantage of these new ideas. However, these major shifts in technology and industry have raised significant issues that we must confront, such as

Digital Transformation of Society: AI-ML, IoT and Data Analytics are transforming how our communications and computing, transportation, financial and energy infrastructures will evolve. Structuring new services, which simultaneously address serving individuals better while providing for social good, privacy and social justice, are critical elements that go hand in hand with a modern 21st century infrastructure for India.

Ethical and Moral Considerations: Generative AI is changing how we think of epistemology, theories of knowledge and creativity. Further, we are getting increasingly close to integrating artificial neural networks with natural neural networks. For example, neuro-marketing based on recording the activity of individual neurons in the cortex has great promise, but it raises serious ethical concerns. What value systems do we need to build into the galloping pace of technology in this area?

The Future of Education and Epistemology: Pedagogy and game playing in Augmented Reality (AR) environments hold the promise of being able to change how we deliver education: that is, for pedagogy to be customized, to an individual's learning styles. At the same time with the advent of Large Language Models (LLMs) and Video Language Models (VLMs), there will be major changes in how we can assess and credential the level of comprehension of concepts by our students. Further, what we mean by knowledge and indeed epistemology itself will need redefinition. How we impart an education needs to keep pace with dynamic information sources, while assessing their provenance, to provide guarantees of the veracity of the information.

We are beginning to enhance our curriculum in each one of our programs to address these challenges. Al and ML are here to stay and will permeate all facets of our life. It is our mission at Plaksha to provide the pedagogy to prepare our students to confront the momentous changes that lie ahead.

Prof. S Shankar Sastry
Founding Chancellor

Shanter Sasty



From the desk of the Founding Vice Chancellor

A year goes by in the blink of an eye when you are engaged with your heart and soul in a mission that resonates deeply with you. It is hard to believe that we are already sharing our Annual Report for 2023-24; feels as though the inaugural report was written only yesterday. During the year, the university has grown from strength to strength while charting out a unique journey in the world of technology education. We embraced cutting-edge technological advancements, aligning with the demands of a fast-evolving world while upholding the rigorous training that fosters resilience, character and fearless problem-solving among our students.

This year was rich with learning opportunities. As we have started getting recognition for our innovative curriculum and fresh approach to technology education, the pool of talent wanting to join the university also has started growing. Now we face the challenge of expanding responsibly to maintain excellence. This careful approach may mean keeping our cohort sizes intentionally small in the short term as we fine-tune methods of scaling excellence in personalized education and nurturing environment. What you see in the following pages reflects our measured steps in this direction.

One of this year's milestones has been guiding our first undergraduate cohort through their mandatory third-year internships. We were thrilled to see the enthusiastic response from global industry leaders and research labs, which eagerly welcomed our students. Even more rewarding was the feedback we received about our students' strong communication skills—a long-standing gap identified by industry leaders in engineering graduates. This feedback underscores our holistic approach: while we prepare students to excel in an Al-driven world, we are equally committed to cultivating their character and nurturing them as compassionate global citizens and capable leaders.

Additionally, we are deepening collaborations with industry and government bodies to make our research and educational initiatives more relevant and impactful. Our partnerships include working with government departments to integrate Al into data analytics and decision-making. We launched various on-campus events, from seminars to fireside chats, featuring distinguished experts across academia, industry, and entrepreneurship. These interactions continue to enrich our students and faculty perspectives and bridge academia with real-world innovation—an essential step forward as we move beyond the constraints of the Covid era.

As you explore this report, we welcome your thoughts and feedback. We are here to listen, learn and incorporate ideas that will propel Plaksha's mission forward with even greater momentum.

Prof. Rudra Pratap Founding Vice Chancellor



From the desk of the Chair of Board of Trustees (On behalf of all Founders)

This year saw many significant events. I want to highlight two. First, the Nobel Prizes for both Chemistry and Physics were awarded for research involving ML and Al. Second, India emerged as a chess powerhouse by winning two historic team golds at the 45th Chess Olympiad in Budapest. These largely disconnected events have different but important implications for all of us at Plaksha. The first highlights that the applications of machine learning and Al are now far-reaching across disciplines. The second one,

and I say this with pride, has shown how India's incredible talent is making its mark on the world stage.

It can't be denied that the combination of technology and talent has been shaping the world for a while now—but the pace at which it is happening is becoming more rapid with every passing year. These are exciting times. And India is now uniquely positioned to shape the technology narrative for the Global South and more broadly for the world.

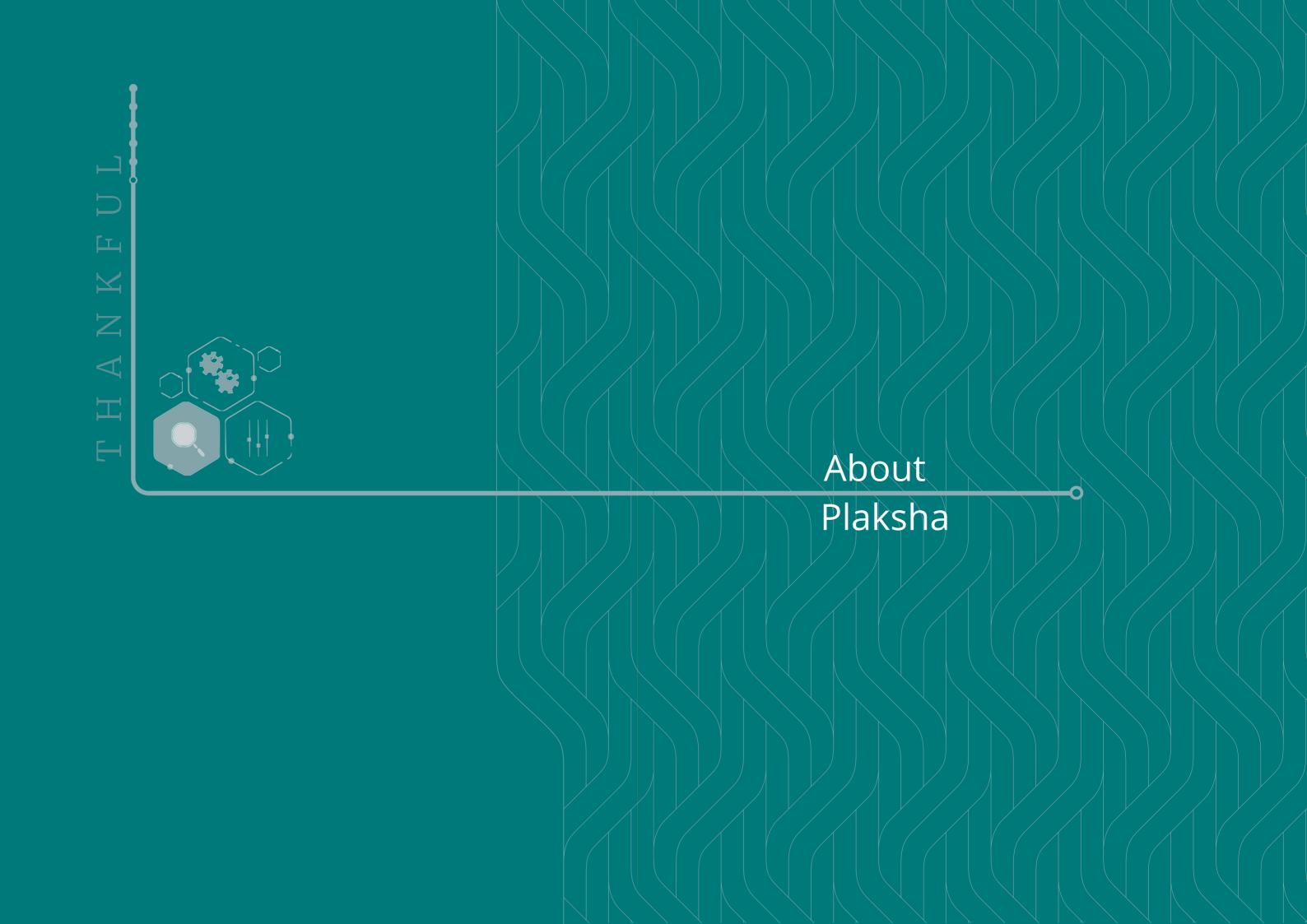
We, at Plaksha, are committed to playing a significant role in inventing and modeling this future. We want to nurture the next generation of tech leaders through academic excellence and by fostering an entrepreneurial mindset, driving interdisciplinary research excellence for creating viable and scalable solutions to complex global challenges and collaborating and engaging with relevant stakeholders, communities and think tanks.

As a greenfield university free from legacy constraints, we are bringing innovation into our curriculum and pedagogy. The campus is abuzz with 500 undergraduate students enrolled in academically rigorous and relevant programs. Our research centers across renewable energy, water security, improving agriculture and addressing health disparities are beginning to get critical traction. We will continue to evolve in this ever-changing world and build further strengths in Al.

We are also deeply committed to executional excellence. We are constantly improving our labs, classrooms, research centers, hostels, recreational and other spaces. Even as we address on ground challenges, we also recognize more needs to be done.

Plaksha will continue to work hard to serve as an exemplar for other academic institutions in India and the Global South, setting a new benchmark for intellectual leadership and shaping the global tech agenda.

Neeraj Aggarwal Chair of Board of Trustees, Plaksha University





The vision of Plaksha University is to nurture and empower the next generation of catalytic leaders. Plaksha collapses the traditional boundaries of engineering and promotes interdisciplinary learning by combining technology, design and entrepreneurship. Plaksha has forged strong partnerships with UC Berkeley SCET, Cornell University, Purdue University, UC San Diego and IISc Bengaluru among others to cultivate an ecosystem of research and innovation.

Plaksha was founded by a global community of more than 100 tech entrepreneurs, business leaders and corporates to **Reimagine Technology Education** and research for India and the world.

Plaksha's sponsoring body, Reimagining Higher Education Foundation (RHEF) is a Section 8 not-for-profit company. It was set up in 2017 with a mission to convert the idea of Plaksha into a reality. In February 2019, the groundbreaking of Plaksha's campus in Mohali took place. In November 2021, the 50-acre campus opened, and undergraduate classes commenced on campus.



Scan to explore Plaksha's foundation

Values



Every student, faculty and executive team member at Plaksha embodies certain values

Curious, Rigorous, Enterprising, Authentic, Thankful and Exemplary.

These are called CREATE.

Curious

Be open to explore, to be in awe of the world and its possibilities, to go where no person has gone before.

Rigorous

Be complete, consistent and thorough In plans and action, leaving no stone unturned.

Enterprising

Be creative, agile and inventive in thought and action, without being constrained by circumstances.

Authentic

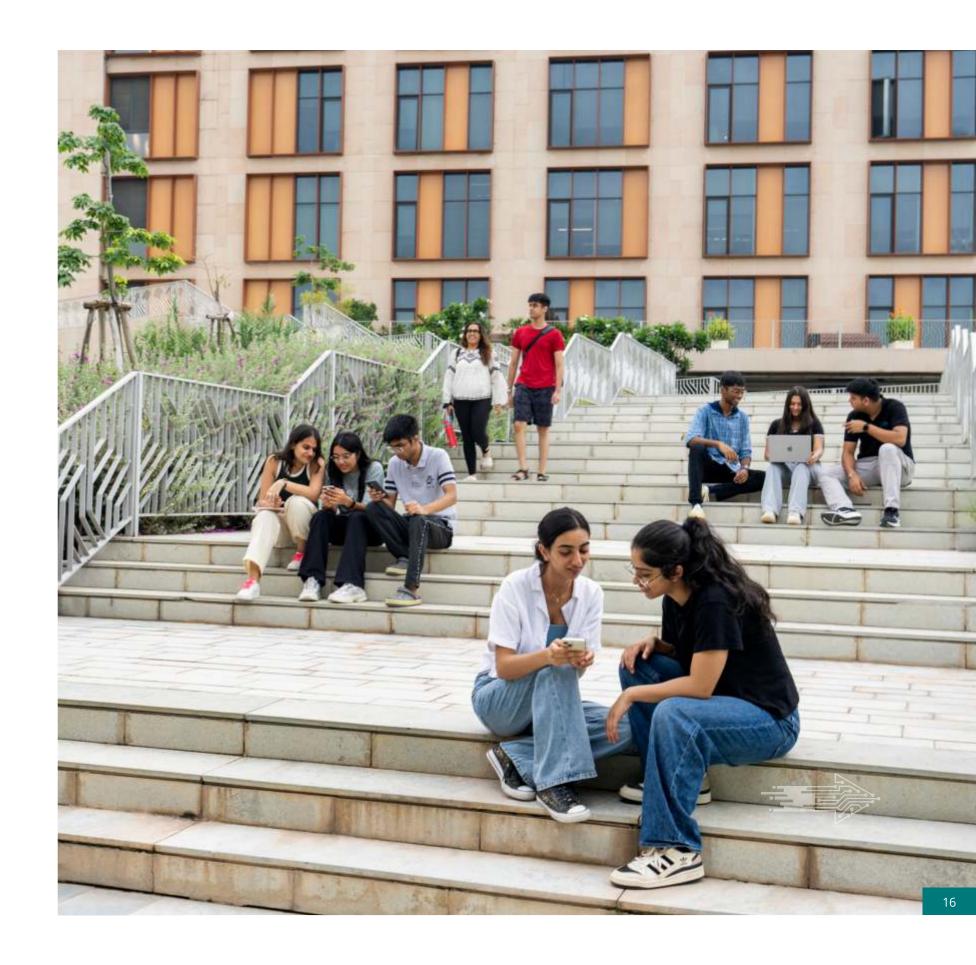
Be true to oneself, colleagues and organization, in ways that are enterprising.

Thankful

Be appreciative and seek out opportunities to acknowledge the good around the world, and positively deal with situations of discomfort.

Exemplary

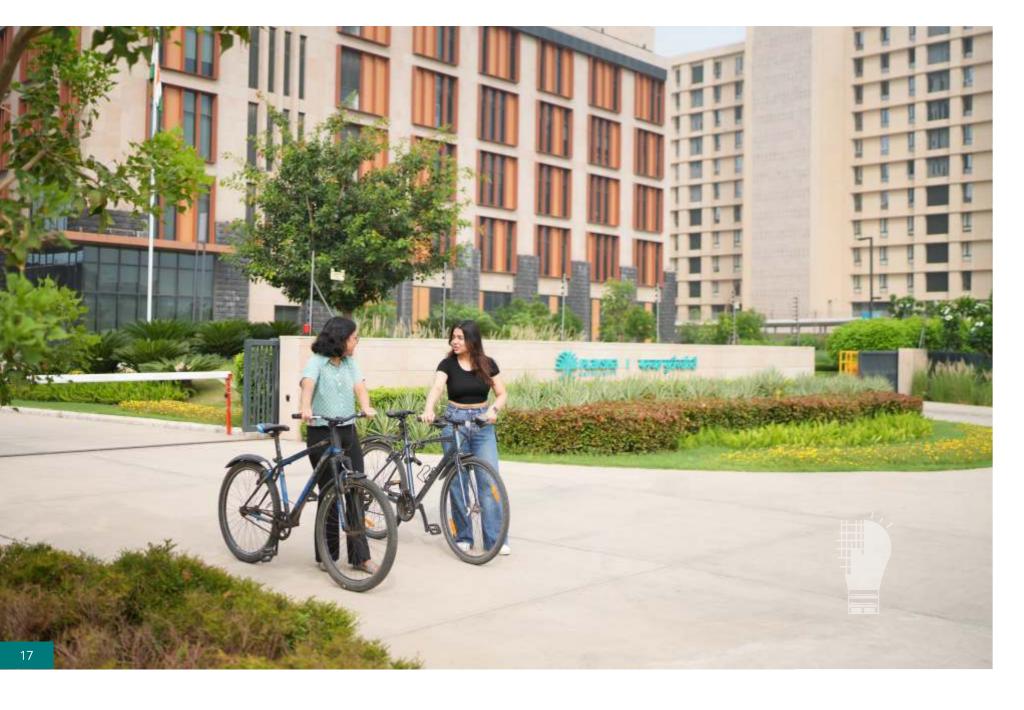
Embody all the values of being Curious, Rigorous, Enterprising, Authentic and Thankful, and be a role model in one or more.



Vision



Plaksha's vision is to produce bold, ethical leaders of tomorrow who transform the world through creative engineering solutions to address the grand challenges faced by society. This is being done by creating an environment where interdisciplinary academic pursuits and cutting-edge research take place within a framework of humanistic values.



3 pillars underpin the vision



Reimagining technology education

Interdisciplinary curriculum integrating technology, social sciences and design. Hands-on pedagogy and focus on self-development.



Enabling research & innovation ecosystem

Entrepreneurial mindset in faculty and students, innovation culture and enabling ecosystem, mentorship and networks.



Addressing grand challenges

Thematic research centers with industry, government and academia collaboration; shared core lab infrastructure.



Gcan to learn about CREATE

Key Statistics



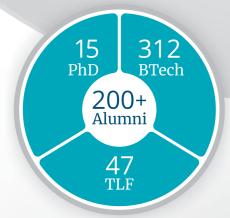
50.12 Campus



6.43
lakh square feet
Built-up
area



4 Research Centers 10+Spaces & labs



Student body



50+
Faculty*
40+Full-time
15 Visiting

4 Programs









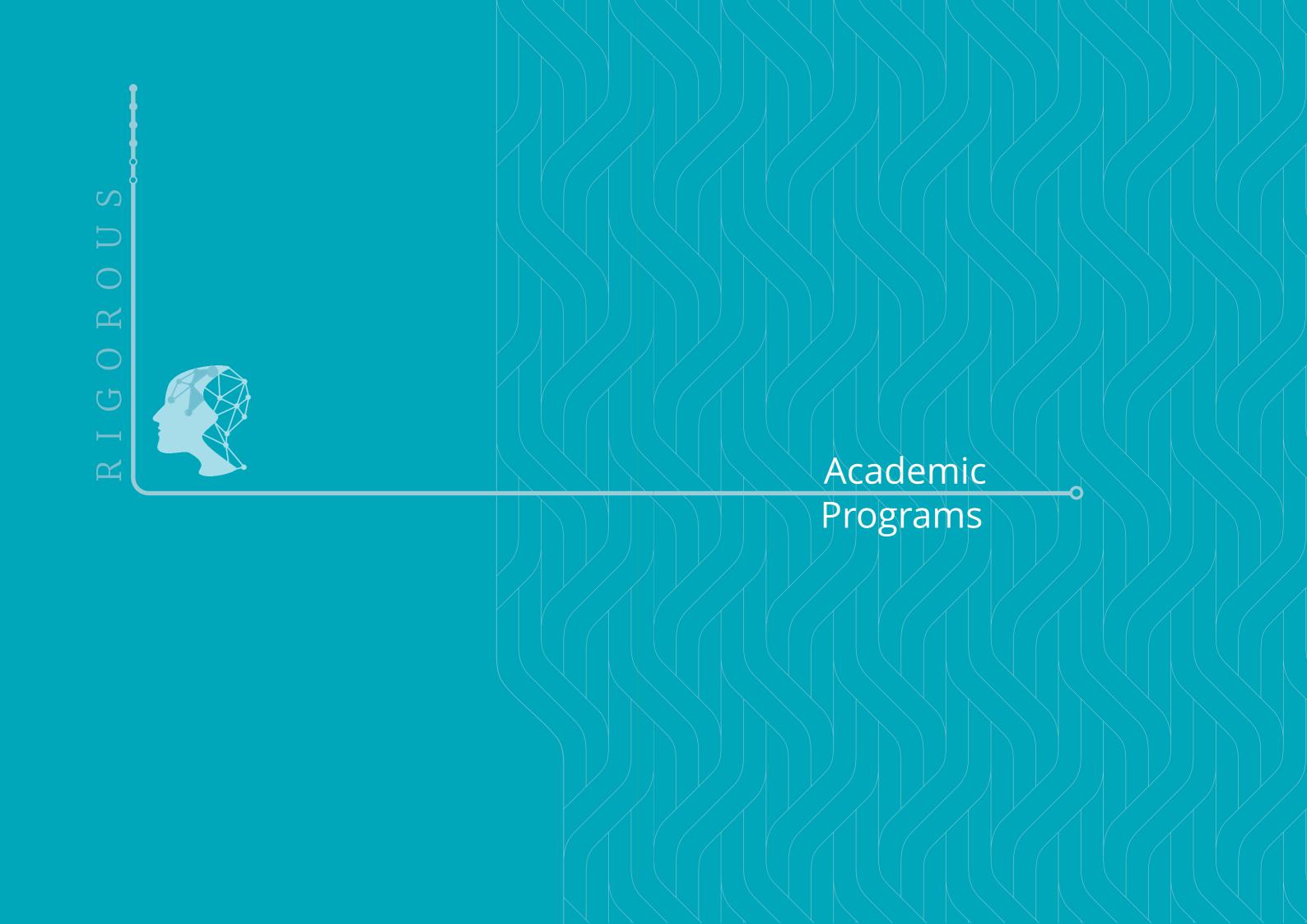
36%
BTech students on full tuition scholarship



₹1100+CR
Commitment raised
100+Founders
20+Corporate donors
from 3 continents



₹39.28 CR
Disbursed in financial aid**



Skills that were once in demand are fast becoming outdated and new roles are emerging

From the desk of Dean Academics



The Fourth Industrial Revolution, fueled by the rapid growth in new technologies such as the IoT and AI, is transforming society and global economies in ways that were once unimaginable. The 21st century workforce is also changing – skills that were once in demand are fast becoming outdated and new roles are emerging.

While the pace of technological innovation in the past decades has been remarkable, higher education institutions have been slow to respond to these challenges. NASSCOM and other industry bodies in India have repeatedly highlighted the employability gap in engineering education and urged institutions to implement some of the key recommendations outlined in the National Education Policy.

At Plaksha, we are committed to the vision of reimagining technology education, nurturing and shaping future tech leaders who can solve the complex, global challenges facing our society. As a new institution, we have a unique opportunity to define what it means to be a 21st century engineer, identifying the core competencies, knowledge and skills critical to adapting to this rapidly evolving technology landscape.

Plaksha's Freshmore, a three-semester, innovative and transdisciplinary curriculum, begins with a rigorous foundation in mathematics, computing and data science. Courses like Nature's Machines provide a unique window into the relationship between engineering and biological systems, while Foundations of the Physical World

explores topics ranging from mechanics and thermodynamics to quantum theory. The Freshmore also includes courses in economics, design and innovation, communication, and the humanities. The Freshmore curriculum and pedagogy are designed to encourage curiosity and creativity, and instill a research and innovation mindset.

We are truly reimagining technology education through our unique undergraduate and graduate programs. Despite being a young institution, we are confident that these programs are transformative and will serve as an exemplar for institutions around the world. Our students' successes and their unique stories continue to inspire and motivate us every day.

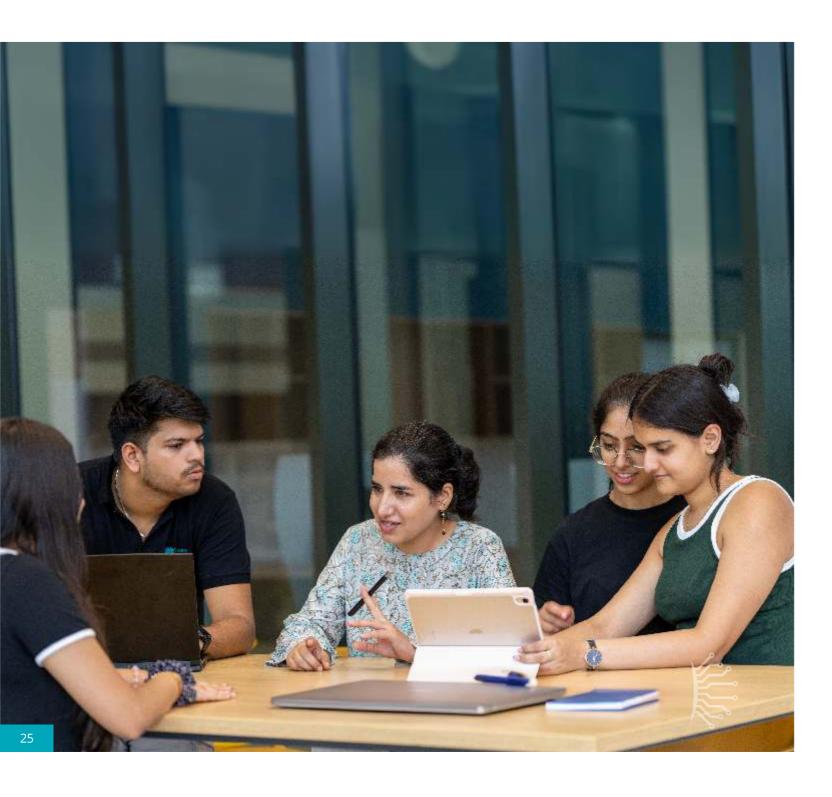


Prof. Nandini Kannan Dean Academics

Marche Ren

Undergraduate Program





The undergraduate program at Plaksha builds on three key elements:



Rigorous and relevant curriculum

Mathematics, computing and data, the core of emerging technologies such as AI, integrated sensing and communication, and quantum computing, form the digital, deep tech foundation of Plaksha's undergraduate program. We have replaced the traditional sequence of mathematics courses that are ubiquitous in most engineering institutions, with courses in differential equations, linear algebra, probability and optimization that blend theory with computations. While programming is part of the curriculum, the computing and data science courses foster computational and algorithmic thinking, and data acumen.

Recognizing the nexus between technology and society, elements of design thinking, social sciences and the humanities are integrated into the technology courses. The curriculum is designed to be transdisciplinary, allowing students opportunities to apply concepts and skills from a number of disciplines to solve complex, unstructured problems.



Transformative and student-centric pedagogy

Fostering curiosity, creativity and instilling the joy of learning requires a student-centric approach to teaching and assessment. Experiential learning that builds on the transdisciplinary, integrated curriculum is enabled through real-life group projects, the integration of research in teaching, and peer-learning. Learning assessments are also designed to move students away from rote learning and memorization to more active learning strategies.



Empowering and aspirational ecosystem

Creating an entrepreneurial mindset and nurturing a culture of research and innovation are core tenets of Plaksha's vision. The enabling ecosystem provides students access to a global network of mentors and thought leaders, including Plaksha founders, many of whom are first generation tech entrepreneurs.



Scan to know all about being a Plakshan

Innovation Lab & Grand Challenges Studio

The Innovation Lab and Grand Challenges (ILGC) studio is Plaksha's flagship program designed to allow students to understand societal challenges and recognize the critical role technology can play in developing innovative solutions. ILGC provides an integrated, project-based curriculum consisting of two three-semester cycles. The first semester focuses on experiencing societal challenges that link to global sustainable development goals. Students go on field trips to understand the diversity and complexity of the challenges faced by the communities around them. In the second semester, they work collaboratively in teams with a focus question to make participatory and non participatory observations and take open-ended interviews. Through this process, students learn to gather primary data effectively and utilize tools such as empathy maps, personas and observational maps to chart their experience and comprehend challenges that are faced by society. In the third semester, students brainstorm possible solutions and evaluate their social and financial value propositions. During the second cycle, students have the option of working in teams with Plaksha's research centers, external agencies, or with faculty members. Students may also choose to work on entrepreneurial ventures or design projects.



- Selected among the top 10 teams for pre-incubation support at ISB's startup competition
- Finalist at the AWS Campus Fund
- Participated in Microsoft
 Founders Hub and Big Fish Pool
 Season 2

H

As part of my fourth semester capstone project, I chose to tackle a challenge I had been contemplating since before starting university — AI for penetration testing automation. What started off as an ILGC project, turned into a startup the following summer. The collaborative environment at Plaksha played a key role in this. Here, it is not only students who come together for projects, but we also get to mingle with industry. It was one such opportunity through Info Edge Center for Entrepreneurship that helped me go beyond academics and redefine my limits. The flexibility to work on a product of my own choice and making, while being taught industry standards and practice, gave wings to my imagination.

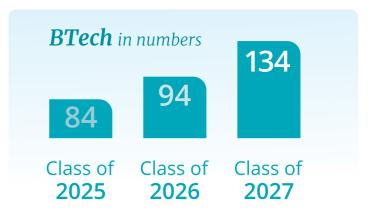
Devesh Shah, BTech Class of 2025



Student Learning Journey at Plaksha

Students entering Plaksha are curious tinkerers. They are also gold medalists, National Olympiad winners, authors and young entrepreneurs. A holistic two-stage admissions process ensures all selected students are passionate about technology, have a creator-builder mindset, explore all facets of technology and innovation, and aspire to be tech leaders, entrepreneurs, researchers and problem solvers. When they graduate from Plaksha, they have the skills to:







project's startup journey

Four Interdisciplinary Majors



Computer Science & Artificial Intelligence

Computer Science and Artificial Intelligence (CSAI) introduces design of new algorithms, systems and machines with powerful computational, sensory, cognitive and inferential abilities to address challenges at the interface of human and artificial intelligence. The CSAI core program has matured into a well-rounded program combining traditional computer science and artificial intelligence. The curriculum includes a set of courses that lay the foundations of computational thinking, the data structures needed for programming, analysis of algorithms, systems programming and networks. On the AI front, students learn classical algorithms for symbolic search and reasoning, along with the modern areas of machine learning, computer vision, game theory, deep learning and reinforcement learning. Equipped with these courses, and a set of electives, students can embark upon a career in industry, in research as well as in entrepreneurship.



Biological Systems Engineering

Biological Systems Engineering (BSE) at Plaksha equips students with a robust foundation in both biological sciences and engineering principles. The BSE curriculum develops a deep understanding of the fundamental principles underlying biological systems, from genetics and molecular biology to cellular processes and organismal interactions. This biological knowledge is integrated with technological and engineering advancements, such as Al-driven approaches, microfluidics and sensing technologies. The program inspires students to harness the capabilities of modern bioengineering and drive forward the creation of innovative technologies. Students are trained with the skills to design and construct bioengineering solutions that integrate biological components at scales ranging from nano to macro, with applications in healthcare and biotech. The BSE program also emphasizes real-world impact through the development of advanced experimental skills, hands-on student projects and internships. By focusing on innovation, the program prepares undergraduates to master techniques for understanding and manipulating biological functions. These experiences enable them to apply their skills in practical settings and contribute to cutting-edge research and development in bioengineering.



Robotics & Cyber-Physical Systems

Solutions to grand challenges increasingly require reaching across the boundaries of the cyber, physical and human worlds. The Robotics & Cyber-Physical Systems (RCPS) program has been designed to target the growing and unmet needs at the intersection of computing, mechatronics and artificial intelligence. It enables students to design intelligent engineering systems that interact with humans and the environment. The curriculum equips students with a strong technical foundation and hands-on experience across robotics, control systems, IoT, computer science and AI, integrating practical knowledge from multiple disciplines. Innovation and critical thinking are fostered through cutting-edge research collaborations with industry and research institutions, focusing on designing and testing robotic and cyber-physical systems. Students also develop ethical awareness and societal responsibility in technology, preparing them for careers with a deep understanding of automation's impacts on safety, privacy and the environment. The RCPS program seeks to nurture interdisciplinary creativity and leadership skills to cultivate world-class tech leaders capable of addressing real-world challenges with ethical considerations.



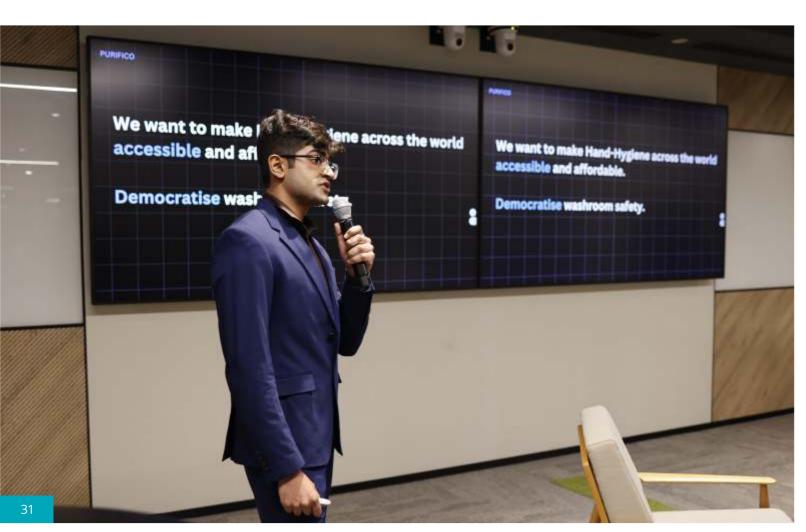
Data Science, Economics & Business

The Data Science, Economics & Business (DSEB) major combines theoretical foundations of data science with tools from economics and finance to create data-driven tech solutions for business, policy and society. Students develop expertise in the theoretical and methodological foundations for data science and economics. The curriculum combines new knowledge from data science and economics to advance frontiers of business, policy and academic research. Students gain an understanding of the complementarities of economics and data science and apply interdisciplinary approaches for business and policy. The DSEB program trains students to formulate new data-driven solutions using economic theory and data science that address real-world problems for social good applying principles of responsible data science, environmental, health, development and personnel economics.

Teaching Programs

Center for Innovation in Education

Plaksha aims to promote forward-looking, innovative approaches to education and learning. The Center for Innovation in Education (CIE) is dedicated to enhancing student learning and faculty teaching experiences by working closely with interested faculty, teaching fellows and individuals involved in course design. CIE plans to support the teaching fraternity to adopt innovative pedagogy and to prepare faculty for designing and aligning content and assessment for their courses. Faculty will also be provided with instruments and Al-based tools for the personalization of teaching. These tools will aid in personalizing teaching practices considering student strengths and interests.



Center for Thinking, Language & Communication

The Center for Thinking, Language and Communication (CTLC) aims to enhance the thinking, linguistic and communicative capacities of the university's engineering students through a variety of initiatives. The center's unique stemX courses seek to equip the students in academic, personal, research and business communication capacities through personalized tutorials and an experiential learning approach. Under TextUs, the center provides writing and editorial support to the Plaksha community. It also established two new verticals in the previous year: LearnED, to offer alternative learning experiences, and ProAct, to undertake social impact projects that also bring revenue to the center.

Highlights

- 3 publishing workshops
 8 research papers
- 3 guest sessions
- 6 partners
- 3 research conferences

With its focus on interdisciplinary education—still rare in many Indian universities—Plaksha is building the foundation for groundbreaking ideas and impactful change. Its state-of-theart infrastructure is a hub for collaboration and creativity, helping Plaksha students emerge as leaders at the intersection of technology and societal needs, thereby making a significant impact on India's economy.

> Ajay Bhardwaj **Anthem Biosciences**

Tech Leaders Fellowship



Tech Leaders Fellowship (TLF), a one-year full-time residential postgraduate program co-created in partnership with UC Berkeley SCET, is designed to nurture innovators, entrepreneurs and technologists who can harness data-driven tools and technologies to address global challenges.

The Fellowship offers an integrated curriculum that blends foundational concepts in AI-ML and Data Science with real-world applications. Fellows develop entrepreneurial thinking, apply design thinking principles to data- driven challenges and gain tech leadership experience.



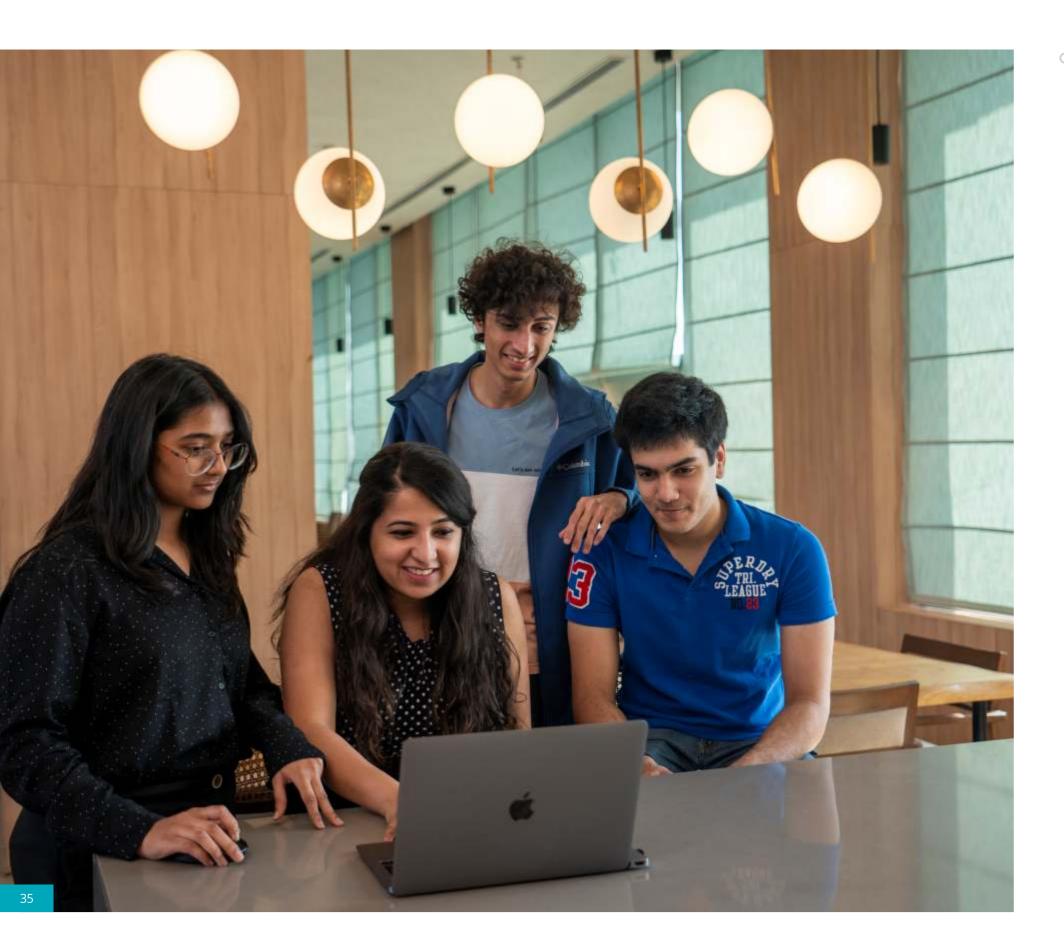
TLF convocation





- Partnership with UC Berkeley's Sutardja
 Center for Entrepreneurship & Technology
- 200+ alumni
- Courses like Fundamentals of Machine Learning, Design Thinking, Foundations of Leadership, Entrepreneurial Challenge Lab, Projects and Applications of Data Science and Natural Language Processing
- Global faculty from institutions such as UC Berkeley, University of Pennsylvania, University of Maryland, and MBZUAI have taught the scholars. Faculty include Ken Singer, Moor Xu, Mark Searle, Monojit Choudhury, Rajeev Barua, Alexander Fred-Ojala, Dwight Jaggard, Sébastien Foucaud, Sudheendra Hangal, Gurman Bhatia, Anuj Kapoor, Raghavendra Singh and Anish Roychowdhury





Al and the World Lecture Series

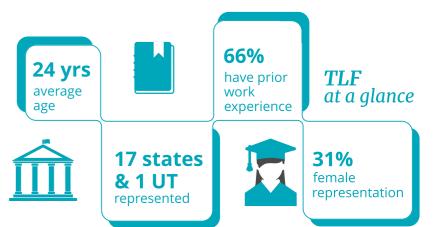
Hosted speakers such as Dr. Aparna Taneja from Google Research, India; Rajat Monga, Founder TensorFlow; Dr. Keegan McBride, Departmental Research Lecturer in Al, Government and Policy at Oxford Internet Institute; and Dr. Manish Gupta, Principal Applied Scientist at Microsoft.

Masters of Innovation Seminar Series

Hosted entrepreneurs and executives such as Srikanth Velamakanni, Co-founder, Group Chief Executive and Executive Vice-Chairman of Fractal; Prerak Garg, Al and Cloud Strategy Leader at Microsoft; Shridhar Marri, Co-founder and CEO, Flyfish and previously CEO and Co-founder Senseforth.ai; Pranav Kothari, CEO Educational Initiatives, and more.

Pitching Finale

At the finale of the Entrepreneurial Challenge Lab course, The Pitching Room, Fellows teamed up to present their innovative startup ideas to a distinguished panel of jury members, including Mark Searle, Vivek Khare, Srabani Ghosh, Somveer Anand and Tanuj Kalia. The six-week effort by Fellows resulted in a showcase of their creativity, entrepreneurial spirit and commitment to leveraging technology for innovation.



Doctoral Program



Plaksha University's doctoral program facilitates a transformative four-year journey, nurturing outstanding researchers equipped with scientific prowess and versatile academia-ready skills. The program is designed to prepare the next generation of researchers to address grand challenges in agriculture, health, water and clean energy, empowering them to shape a brighter future.

Graduate Research Symposium

The PhD program involves projects that look at grand challenges from a technological as well as a societal lens. During the inaugural Plaksha Graduate Research Symposium conducted in August 2023, Plaksha's PhD scholars presented their research across a wide range of domains such as precision agriculture, health, water security, economics, humanities and social sciences. The keynote talk was delivered by Prof. Rajesh Gupta, founding director of the Halicioğlu Data Science Institute and a distinguished professor of Computer Science and Engineering at UC San Diego.

Highlights

PhD students have been actively participating in both national and international conferences.

- Sruthi VS presented at Feminism(s) in Media Conference, Gent University,
 Belgium in September 2023
- Neelam Sarmah won best poster award at the international conference on 'Membrane based separations: Past, Present & Future' at Vadodara in October 2023
- Rajiv Ranjan won runner up award in student research symposium in National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG) at IIT Jodhpur in July 2023

The research areas available for PhD scholars at Plaksha are:

- Al/ML and Automation
- Computer Science
- Electronics Engineering
- Applied Mathematics
- Computational Biology
- Humanities and Social Sciences
- Engineering Education
- Design Thinking
- Robotics
- Behavioural Economics
- Economics
- Water Technology



Scan to learn about advancing undergraduates in research

Faculty, founders and PhD scholars

Young Technology Scholars `



YTS is a two-week intensive summer program where students are exposed to real-world engineering and problem-solving. Through hands on learning and interdisciplinary coursework, participants learn to leverage technology to address complex challenges. This year, Plaksha hosted 200 talented high-school students from different cities across India, including Delhi, Gurugram, Hyderabad, Kolkata, Mumbai, Bengaluru, Gangtok, Dehradun, Indore, Pune, and international students from Singapore and USA.

5 Captivating Projects

- ECG Machine
- EMG Machine
- Game Designing
- Tele-operated Robots
- Agbot

These projects are designed to foster creativity, critical thinking and innovation among students who received mentorship from esteemed Plaksha faculty members and industry experts, including Dr. Ravi Jasuja, Director, Translational Research & Discovery, RPMH, MGB, Harvard Medical School, and Dr. Hanumant Singh, Director, Multidisciplinary Center of Robotics, Northeastern University.

45

Cities



200 Students 123 Schools represented par

Female participation Students from tier 2/3/4 towns





Young Creators League

YCL is a tech innovation challenge designed for high school students who believe they have the power to be changemakers. Over 1000 school students from 167 schools across India submitted 332 prototypes and projects based on UN SDG problem statements. YCL 2024 initiated an 'All Girls Team' campaign to encourage more female participation. This resulted in 81 'All Girls Team' submissions. The final event was held on the campus and witnessed over 100 school students presenting prototypes in a grand exhibition.

Grand Exhibition

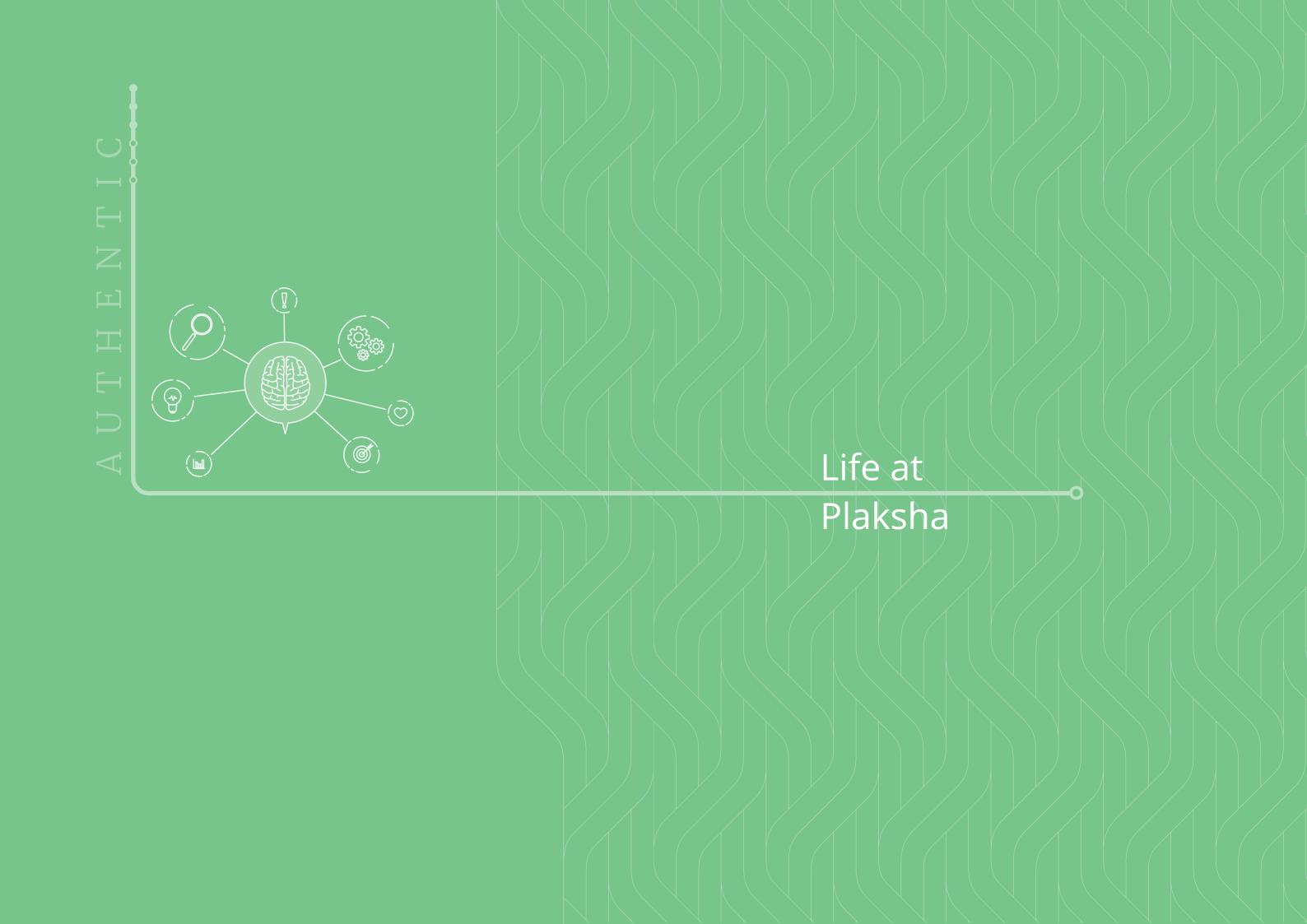
101 Students

42Prototypes

35 Schools represented 13 All-girls teams



Scan to meet



Student Achievements



At Plaksha, academic excellence is a cornerstone of student experience. Students are supported in excelling in all domains. They are encouraged to become entrepreneurs, tech leaders, and follow their practice through hands-on learning. This year, the achievements of the Deans List awardees and other exemplary students who have excelled in various fields are highlighted.

Deans List 2023

Curiosity and rigor lie at the core of Plaksha's academic mission and programs. The innovative curriculum and pedagogy have been designed to create authentic future tech leaders. They encourage creativity among students. While Plaksha recognizes every student's contribution as unique to Plaksha and urges them to follow their passion and dreams, this year the inauguration of the Deans List acknowledged students who demonstrated Plaksha's values through their outstanding academic performance.

The Deans List is the annual award for the top 5 undergraduate students in second and third year. They were recognized for their performance during the academic year 2022-23 for setting an example for their peers and the batches to come.

Class of 2025

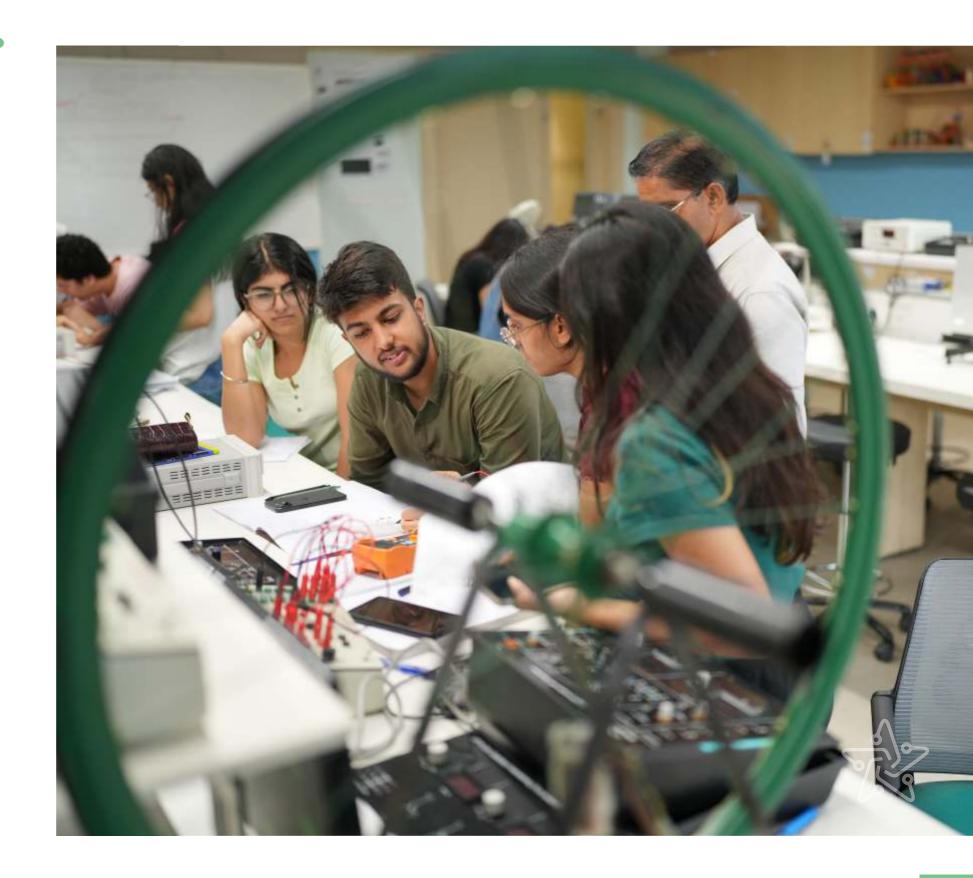


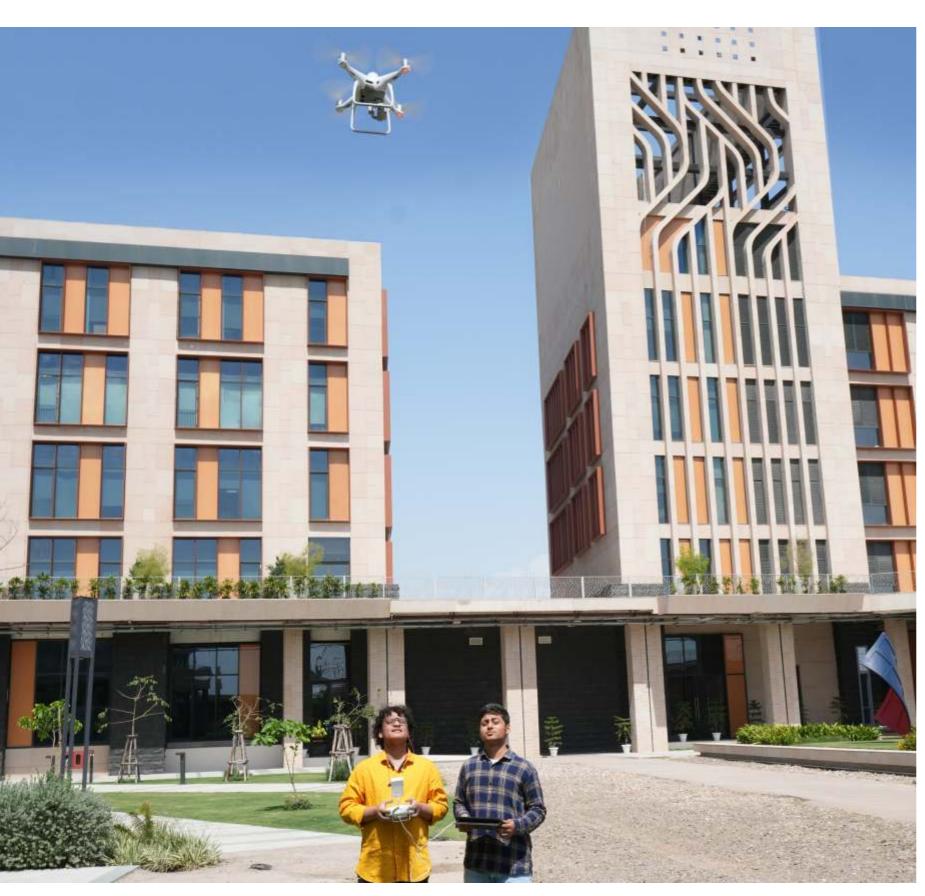
- Amol Harsh
- Avishi Rajgharia
- Kaustubh Singh
- Sanidhya Singh
- Vedika Agarwal

Class of 2026



- Aman Paliwal
- Jia Bhargava
- Satvik Bajpai
- Subham Jalan







UCEE Annual Student Forum

Noyonica Chatterjee, a BTech Class of 2025 student, showcased remarkable talent by securing a spot among the top 20 presenters at the Indo Universal Collaboration for Engineering Education (IUCEE)'s Annual Student Forum. Her Grand Challenge Scholars Program (GCSP) project focused on enhancing deaf education through the integration of ML models for sign language-to-text recognition and sound visualization using Chaldni Plates. Noyonica's work exemplifies the power of interdisciplinary research and its potential to create positive social change.



Eyantra Robotics Competition

Arnav Rustagi, Abhinav Lodha, Pranjal Rastogi and Subham Jalan of BTech Class of 2026 represented the university at the finals of the prestigious Eyantra Robotics Competition (EyRC) hosted by IIT Bombay and e-Yantra at IIT Bombay. There were over 10,000 participants from over 3,500 colleges competing across various themes in this annual competition. The team from Plaksha was placed within the top 5 (out of 450+) teams under the theme GeoGuide, and ranked among the top 197 overall. Students put their skills to the test and built 'an autonomous line following robot with computer vision that classifies events using the organizer's priority'.

Student Life



The past year was characterized by a dynamic campus life, fueled by an enthusiastic student body. Students actively participated in various events, sports and club activities, which enriched the vibrancy of the campus and fostered a strong sense of community. Plaksha sportspersons participated in numerous intra- and interuniversity tournaments.

The campus has multiple indoor and outdoor sports and activities. Other facilities like dance room, yoga studio, music room and wellness center are also available.

Clubs and initiative

Many student-led clubs and initiatives on campus encourage students to pursue their interests and passion. Clubs organize events and activities throughout the year, engaging students and enhancing their university experience.

- Art Club
- GWiST
- Baking Club
- Kartavya
- Cydef Club
- LEAP
- Consulting Club
- Music Club
- Dance Club
- MUN Club

E-Cell

- Product Club
- Finance Cell







Highlights

Hackaplaksha

A 48-hour long coding event organized by the Product Club attracted many talented and innovative minds

TEDx at Plaksha

TEDx

The TEDx team brought inspiring speakers to the campus and stimulated thought provoking discussions

Plakshathon

Plakshathon, Plaksha's annual marathon, saw an impressive 190 registrations, highlighting the growing enthusiasm for sports and fitness among students. The event was a resounding success, fostering camaraderie and healthy competition across the campus

Spaces to thrive and grow

Multipurpose Hall

The Multipurpose Hall at Plaksha is a state-of-the-art indoor recreation area. Supported by Plaksha's corporate donor V Mart, the facility has three wooden badminton courts and one wooden basketball court on the ground floor. Practice and training sessions by a coach are held daily for students. The Multipurpose Hall is being developed and designed as a vibrant urban space for yoga, chess and a host of other activities and games.

Kamala Devi Murlidhar Kela Dining Hall

The Dining Hall at Plaksha can seat over 150 students, faculty and team. This space was built with support by Plaksha's Founder and Trustee, Madhusudan Kela with the belief that "You are what you eat". Operational through the year, the Dining Hall caters to all taste buds with an array of choices.

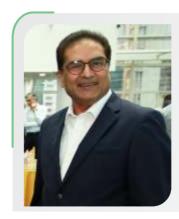


APL Apollo Fitness Studio

The APL Apollo Fitness Studio is a signature space for students, faculty and teams passionate about fitness and well-being. This state-of-the-art facility has a weight room, a functional exercise area and a cardio zone. These areas feature the latest gym equipment suited for improving endurance, building strength or engaging in functional workouts. The fitness studio also has a dedicated instructor to provide personalized guidance and training, ensuring a tailored regime for everyone.

Cultural Arts Studio

The Cultural Arts Studio at Plaksha is a vibrant hub dedicated to the artistic expression of the soul. This inspiring space is designed for students to discover, hone and master their talents in dance and music. The studio is perfect for programs and recordings, offering an environment that nurtures creativity and artistic growth. Throughout the year, the studio hosts workshops in a variety of dance and music genres, providing opportunities for continuous learning and exploration. Here, dance and melody come together, creating a rich, immersive experience that enhances the artistic journey of every student.



Education has the power to transform lives. Supporting Plaksha University's hostel is our way of giving back to the kind of nurturing environment that shaped our own journeys.

Raamdeo Agrawal
Motilal Oswal Financial Services Ltd

50

Student Hubs



The 50-acre campus is tech-enabled and has been designed as a living lab—a space that fosters creativity.

HDFC Innovation Hub

Supported by the HT Parekh Foundation, the HDFC Innovation Hub is a beacon of cutting-edge education and entrepreneurial support. It has been designed as a center to drive widespread impact:

- Create, develop and integrate technologies and experiences to address grand challenges with an emerging market focus
- Promote an innovation ecosystem with an emphasis on design, hands-on learning, critique and reflection
- Nurture a collaborative ecosystem of faculty, students and researchers bringing together diverse and interdisciplinary areas of interest, inquiry and research

This hub is spread over two floors covering an area of 25,500 square feet. It houses the Robotics Lab and the Info Edge Center for Entrepreneurship, both of which play a crucial role in fostering innovation and practical learning.



The HDFC Innovation Hub houses specialized labs, studios and co-working spaces for students, faculty and industry



Plaksha is poised to lead innovation and drive nextgeneration solutions to India's grand challenges, such as in agriculture and energy. Plaksha will soon be a leader in some of these intersections and make a big impact on the Indian economy.





Jefferies Finhub

Jefferies Finhub is a learning space to develop expertise in data science, analytics and technology in the domain of finance. At Plaksha, this is done via capstone, research projects and internships. There are multiple Refinitiv terminals at the Jefferies Finhub that create a simulated trading environment.

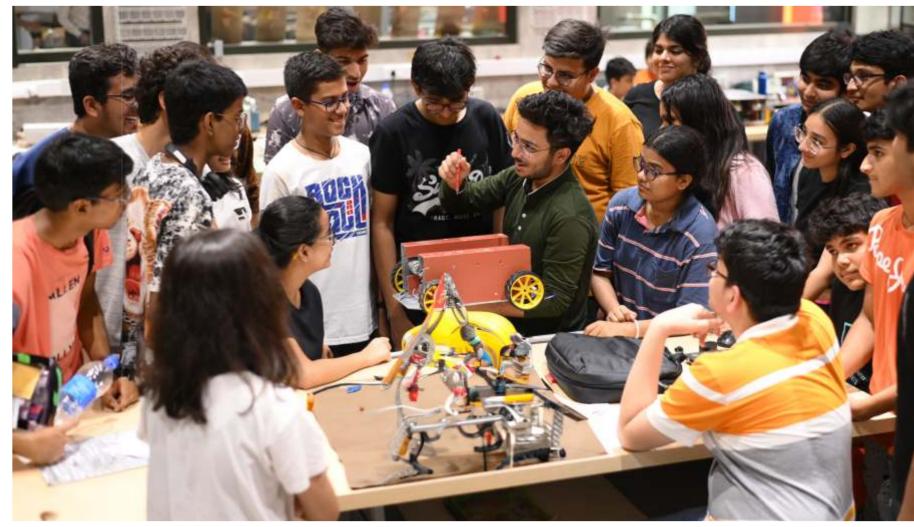
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Makerspace

Plaksha's Makerspace offers a collaborative environment to impart experiential, hands-on learning. It helps students design, build and test prototypes, which are the first few steps towards developing novel and practical solutions to solve society's grand challenges. It is equipped with 3D printers, scanners, robotic kits, electronic zone, hand tools, CNC machinery, laser-cutting machines and metal and wood fabrication machines, among others.



learning by doing



The Makerspace inculcates experiential and entrepreneurship abilities amongst students



Anthem BioSciences Nature's Machines Lab is designed to connect students with the intricate machinery of the natural world

Asha Mukul Agrawal Library

The Asha Mukul Agrawal Library is a grand space for research, reading and learning. It is well stocked with books and learning resources for students and faculty. The library gives students a chance to discuss innovative ideas, collaborate on interdisciplinary project work, and benefit from multimedia tools and digital resources. It also ignites students' desire to connect with books and further their knowledge.

Diversity, Equity & Inclusion



(Supported by Mphasis)

Plaksha makes higher education equitable by celebrating inclusive and diverse perspectives.



Attract diverse talent

Plaksha actively recruits and retains students, faculty and team from under-represented and diverse backgrounds, thus fostering innovation, creativity and effective decision-making within all teams



Champion inclusivity

Plaksha aims to create an inclusive space through affinity groups. Engagement activities enhance personal and professional development while fostering a sense of belonging and authenticity in the workplace



Build equitable systems

Plaksha embodies the principles of participative decision making, soliciting views from multiple stakeholders. Policies follow leading global benchmarks to ensure zero discrimination



55

GWiST mentoring walk

Girls and Women in STEM (GWiST) is an initiative to build a community of women leaders in the technology space in India. GWiST organized a mentoring walk and panel discussions with women leaders, in association with Vital Voices and Beyondiversity. The event focused on fostering an ecosystem to amplify the participation of girls and women in STEM. Women mentors and panelists shared personal anecdotes and discussed the STEM landscape in India.

A session of this it was

Scan to know more about GWiST

Psychological safety at work

A session on 'Unconscious Bias' was taken up with Plaksha students. Through this it was emphasized that it is important to define the words diversity, equity, inclusivity and behaviors that complement them so that we can hold ourselves and others around us accountable.





Scan to learn about Plaksha's admission process

Committed to **Inclusion & Diversity***

73.7% 31% Students on Female scholarship strength 94.3% 56% Students from Average Class Tier 2/3/4 XII grades towns **3** union **67** cities 21 states

*Across BTech cohorts as of March 31, 2024

Center for Student Well-being

Well-being affects how we think, feel and act. To equip students with skills to make sense of new experiences and explore their socio-emotional journey life skill courses such as 'Universal Human Values', 'Science of Being Human' and 'Introduction to Psychology' have been introduced.

Group sessions at MCKS Thrive Room

Group sessions are conducted to build emotional skills on themes like handling transitions, understanding emotions and building coping skills.

Individual therapy sessions

Individual therapy sessions are conducted to provide a safe space to talk and seek help.

Highlights

Rangrez (Art Club) Collaboration

Well-being Coping Skills Scavenger

'Pet Your Stress Away' Event



- Scored the highest marks in two major
- Part of the volleyball team at Plaksha

territories

Interned at IISER Mohali, working in the pharmaceutical field that uses crystal engineering techniques and advanced instruments to solve drug solubility issues

Soorya S, BTech Class of 2026

My journey at Plaksha has been nothing short of transformative. Hailing from Kerala, I experienced a culture shock upon moving to Punjab. Diverse food, new people and stark temperature difference, along with the experience of being away from home for the first time, were all daunting. I struggled to adapt to the environment, and everything felt overwhelming. However, things began to change as I slowly found my footing among friends who created a welcoming ambiance. Additionally, the faculty at Plaksha provided me with tremendous support in academics and beyond, making the environment inclusive.

Financial Aid



Plaksha is committed to ensuring that no deserving student is denied access to education due to financial constraints. Financial aid at Plaksha comprises need-based scholarships that keep the merit bar consistent, as well as merit-based scholarships. These are possible because of generous contributions of donors Axis Bank, ATE Chandra Foundation, Bharti Airtel Foundation, DSP Investment Managers, IndusInd Bank, Jefferies and V Mart, among others.

Distinguished Scholarships



Axis Bank Scholarship

Axis Bank Scholarship aims to support deserving candidates from diverse socio-economic, gender and geographical backgrounds, pursuing full-time undergraduate program.

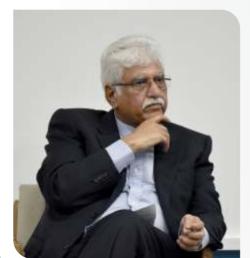
Ayyalasomayajula Lalitha Scholarship Fund

The Ayyalasomayajula Lalitha Scholarship Fund seeks to provide financial aid to deserving women students from a less privileged background pursuing full-time postgraduate programs at Plaksha. This scholarship fund is instituted and initially supported by the ATE Chandra Foundation (ATECF).

Bharti Scholarship

Bharti Scholarship is a highly prestigious scholarship awarded to exceptional students from diverse socio-economic backgrounds to pursue full-time undergraduate studies at Plaksha. Set up by the Bharti Airtel Foundation, the vision of Bharti Scholarship is to nurture bright young individuals, particularly girls, and empower them to become trailblazers of tomorrow.



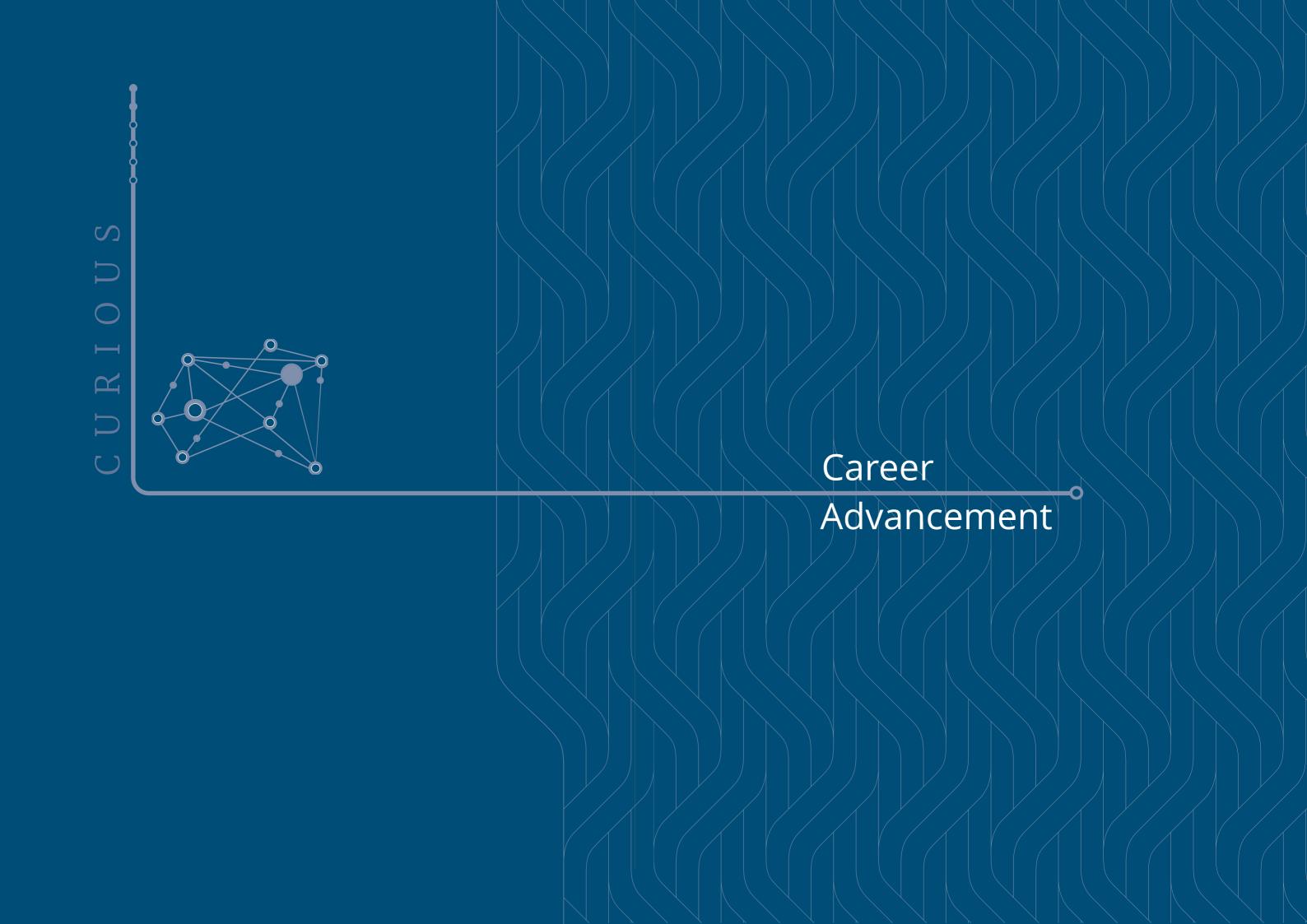


India's growth in STEM will be significantly strengthened by the active participation of women in these fields. The 'Bharti Scholarship' at Plaksha University is our commitment to empowering students from diverse socioeconomic backgrounds, particularly women, to achieve academic excellence and pursue their dreams. By nurturing their education in research, design, innovation and entrepreneurship, we are not only investing in their futures but also in the future of India.

Rakesh Bharti Mittal

Bharti Airtel Foundation

Bharti Airtel Foundation



Office of Corporate Partnerships & Careers*



The Office of Corporate Partnerships and Careers (CPC) looks at internships, placement opportunities and training for career advancement of students. The objective of the office is to ensure superlative career outcomes for all students at Plaksha by creating long-term and mutually value-adding partnerships with industry.

CPC undertakes various initiatives



Corporate placement support



Profile building & curation support



Corporate networking engagements



Alumni engagements



Mentorship & counselling



Fireside chat on careers in tech with Hitesh Oberoi, Co-Promoter, MD and CEO, Info Edge Ltd

Industry session by Dr Sachin Gulati, Director - Global Talent Acquisition, American Express

Placements at a glance



Tech Leaders Fellowship (TLF) has successfully graduated more than 200 students in the last four years.

Companies including Arcesium, Policy Bazaar, Jubilant, and Educational Initiatives have recruited from TLF. Students were hired across diverse sectors, including but not limited to, Information Technology, consulting, EdTech, HealthTech, and social impact.

10% students received offers to pursue higher studies at top global universities like NYU Tandon School of Engineering, University of Washington, University of Toronto, and Columbia University. In addition, 10% students went for entrepreneurship.

Internships at a glance

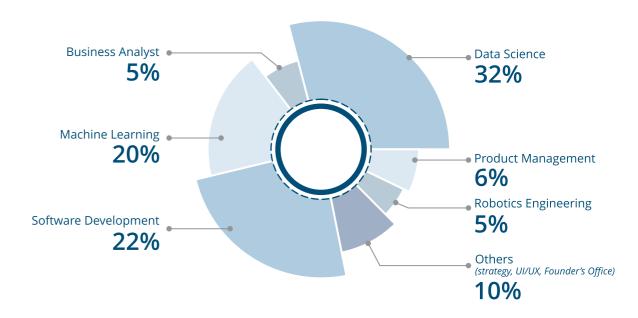


The BTech Class of 2025 interned at companies like Arcesium, Axis Bank, Boston Consulting Group, Fractal Analytics, Jefferies, JM Financial, Microsoft India R&D, Make My Trip and Wayfair.

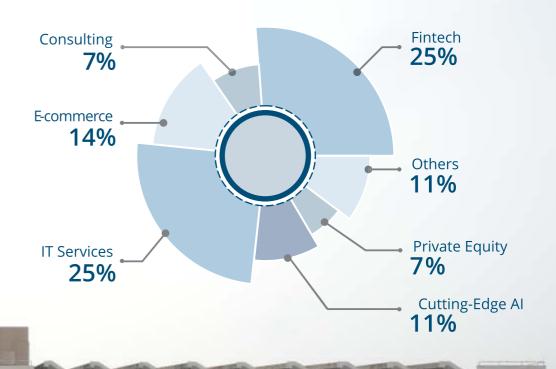
They worked in roles such as product management, data science, software development, consulting, robotics engineering, market analytics, business analytics.



Roles



Industry



Office of Global Engagements*





The Office of Global Engagements (OGE) stands at the forefront of shaping a cohesive and sustainable global community by promoting high-impact research and innovation, and embracing diversity. It is dedicated to fostering a research-intensive network of strategic partnerships.

OGE undertakes various initiatives

Fostering international & domestic institutional partnerships

Facilitating collaborative research opportunities

Advancing student mobility - inbound & outbound



Plaksha signed an MoU with Cornell University to facilitate academic and scientific collaboration

As a part of our commitment to build global engagement, advance education and pioneer research,

Plaksha renewed its partnership with Purdue University

Partnerships

INTERNATIONAL

UC Berkeley Sutardja Center for Entrepreneurship

Brigham & Women's

Hospital

Cornell University

UC San Diego

Purdue University

DOMESTIC

IISc Bengaluru

IIT Bombay

IIT Kanpur

IISER Mohali

PGIMER Chandigarh

At the core of OGE's mission lies an unyielding commitment to empower students by creating diverse opportunities as they strive to broaden their international horizons.



Scan to learn about the internship experience at UCSD

Highlights



Outbound student opportunities

DSEB major Suhani Jain spent two months at Stanford University. She worked on a VR platform for public speaking training and a data optimization framework to bridge gender gap in STEM education and careers.

Ananya Shukla, BTech Class of 2026, interned online with Dr. Brenda Rubenstein at the Rubenstein Lab, Department of Chemistry, Brown University.

Amol Harsh and Shivam Kumar, BTech Class of 2025, interned at Singapore University of Technology Development (SUTD). Amol worked on enhancing SimMobility and Shivam contributed to the development of drifters.



Trisha Purnaiya, majoring in Human Sciences at the University of Oxford, interned under Dr. Brainerd Prince at CTLC at Plaksha



RCPS major Rahath Malladi interned under Prof. Tauhidur Rahman at UCSD. They worked on building IoT devices and explored robotic interventions

Outbound faculty visits

Prof. Amit Sheth visited several notable makerspaces including Aalto University's FabLab in Helsinki, OEDK at Rice University in Houston, and the Jacobs Institute of Innovation in Berkeley, among others. The visit shed light on different makerspaces, their equipment, and how such facilities can be developed at Plaksha.

Assistant Professor Dr. Navjot Kaur attended a sabbatical to explore CRISPR technology applications in agricultural ecosystems at College of Agriculture and Life Sciences, North Carolina State University (NCSU).

H

As an RCPS student, I had the opportunity to explore diverse domains of engineering, including mechanical engineering, electronics, rapid prototyping, machine learning and computer systems. One of my standout experiences at Plaksha was my introduction to a research opportunity at University of California San Diego (UCSD). The professors, understanding my interest in the major, recommended me for this opportunity. My journey at Plaksha has been incredibly enriching. The university's emphasis on interdisciplinary learning and real-world applications has helped me immensely to enhance my understanding of robotic systems.

Kaustubh Singh, BTech Class of 2025

- Project at UCSD was focused on mitigating the risk factors associated with the spread of influenza-like illnesses
- At Plaksha, Kaustubh has worked on projects such as the self-balancing robot and a quadruped. He has learned to leverage foundational knowledge to build complex systems that have a direct impact on daily lives



Info Edge Center For Entrepreneurship



The Info Edge Center for Entrepreneurship is committed to fostering visionary ideas and propelling innovations from laboratory to market.

The center organizes minor programs, virtual incubation and mentorship sessions for students. Collaborations with global universities bolster creation of startups as well as offer a gateway for international ventures into India.

BTech student Prerit Rathi pitching to early-stage VCs for the Al-enabled software, *Indri.yeah, that bridges communication gap for the hearing impaired*

CFE undertakes various initiatives



Empowering students to launch ventures

Plaksha Summer



Plaksha Launch Accelerator Program (PLAP)



Guest sessions with industry leaders



Plaksha's annual entrepreneurship





Forge partnerships

Knowledge

webinars



Plaksha Summer Innovation Program

The Plaksha Summer Innovation Program (PSIP) is a student-led initiative focused on the journey of transforming ideas into prototypes. It is a 45-day deep dive into the world of ideation, prototyping and launching startups.





12 **Teams**

Grants to build prototypes

Plaksha Launch Accelerator Program

16 Startups applied

Startups selected Plaksha Launch Accelerator Program (PLAP) is a 6-month pre-seed program for the Plaksha community designed to empower startups in their nascent stages. By providing comprehensive support to early-stage ventures through a curated blend of mentorship, resources and strategic guidance, it aims to propel promising startups towards a trajectory of excellence.

Alchemy '24

The first edition of CFE's annual event, Alchemy '24, hosted panels on scaling operations, fintech innovations and investing for early-stage companies. Attendees got the opportunity to understand the world of entrepreneurship and angel investing.



Reimagine innovation

Student projects supported by CFE

LECTRIFY

An Al chatbot leveraging the learning method of the protégé effect to develop engaging, personalized study plans for students struggling with difficult subjects.

PURIFICO

Hand dryers with built-in UV sterilizers to disinfect surface area after drying hands.

EASY PC

Modular, upgradeable PC design enabling casual gamers to modify storage, graphics etc. without technical skills for an affordable gaming rig.

AIRIS

Retail video analytics through computer vision, providing store owners detailed customer behavior insights to optimize sales.

GLYDE

Cab app with variable pricing based on user priorities for cheaper fares or quicker rides.

PROJECT EDDY

Building PCs entirely from open-source software like Linux to offer high-spec performance at a fraction of mainstream costs.

SAATHI

App for migrant workers to check eligibility and guide enrolment for public welfare schemes.

INDRI.YEAH

Sign language conversion app enabling communication between deaf and hearing communities.

CYBERUNBOUND

Specialized cybersecurity training with industry-grade tools to make professionals interview- and job-ready.

THIRD

Peer-to-peer platform for college students to borrow or lend money, easing short-term cash crunches.

LIFESAVER

Prevents overloaded cargo vehicles by alerting drivers when weight distribution exceeds prescribed limits.

WISE WANDER

Travel app offering customized, budget trip recommendations using Al to match user preferences for experiences like adventure or culture.

"

I found the logic of setting up
Plaksha pretty compelling. A
bunch of IIT alumni felt that India
needs a new kind of technology
university in the private
sector—and they got together to
form Plaksha. We found this cause
worth backing at Info Edge. I
think it is about solving an
unsolved problem, a need gap.

Sanjeev Bikhchandani Info Edge India Ltd



Research should be adaptable, sustainable and focused on addressing the root causes of problems, and not merely their symptoms

From the desk of Dean Research



Universities are the birthplace of knowledge. Transforming this academic knowledge into practical solutions to address major global challenges—such as access to affordable and personalized healthcare, availability of clean water and air, sustainable energy, agriculture, and social equity—is the focus of the Office of Research.

We are committed to ensuring that our work extends beyond theses and academic papers to bring tangible benefits to society. Society is facing increasingly complex challenges that cannot be tackled with quick fixes or narrowly focused interventions. Therefore, we consider the overall environmental, social, and

economic impacts of our work while developing solutions.

Research should be adaptable, sustainable, and focused on addressing the root causes of problems, not merely their symptoms. By closely collaborating with government bodies, corporations, industry leaders, and NGOs, we ensure that our research is not only innovative but also relevant, scalable, and aligned with policy frameworks.

Our interdisciplinary teams—comprising experts from diverse fields—work tirelessly to ensure that our solutions are both technically sound and socially viable. Laboratories such

as the Microclimate & Clean Energy Lab, Molecular Cell Biology/CRISPR Tech Lab, Water Technology Research Lab, Dixon IoT Lab, Robotics Lab, and Digital Twin Technology Lab are actively engaged in a full spectrum of work, ranging from basic research to applied innovations.

To nurture this mindset in our students, we foster a culture of innovation and problem-solving from the beginning of their academic journey. Involving undergraduate students early in research equips them with the skills and creativity needed to tackle future challenges. Their fresh perspectives and enthusiasm are invaluable, ensuring that our research remains forward-thinking while staying grounded in real-world applications.



rish gars.

Prof. Vishal Garg
Dean Research

Research Centers



Plaksha has four research centers dedicated to addressing global challenges in clean energy, sustainable agriculture, water security and equitable healthcare. These centers are supported by state-of-the-art research laboratories.

Indorama Ventures Center for Clean Energy

The Indorama Ventures Center for Clean Energy (IVCCE) is dedicated to support India's transition to a net zero-carbon, self-reliant and energy-secure future and contribute to the global effort in reducing carbon emissions. Their goal is to develop industry-relevant professionals and entrepreneurs capable of contributing significantly to the clean energy drive.

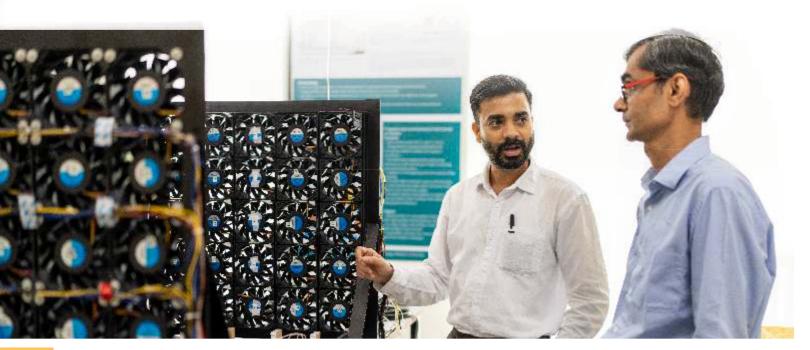
Research areas

Decarbonizing residential cooling

IVCCE has developed a first-of-its-kind living laboratory to comprehensively evaluate the decarbonization potential of centralized cooling and heating systems with thermal storage in Indian residential settings.



Scan to know more about Indorama Ventures Center for Clean Energy



Mitigation of urban heat island and walkability infra-assessment

To support the implementation of cool surfaces to reduce urban heating. A technology framework has been developed to track the adoption of urban cool roofs and climate change through multi-spectral satellite imagery.

Smart homes energy management

Develop and evaluate the impact of the Smart Home Management System on human behaviour (through nudges) towards energy savings and shifting of demand.



Center for Water Security

India ranks among one of the highly water-stressed countries, facing a significant gap between available water supplies and the rapidly increasing demand. This is compounded by significant water quality issues with both ground and surface water sources being contaminated with multiple pollutants from domestic, agricultural and industrial sources. The Center for Water Security (CWS) is a multidisciplinary research center aiming to develop affordable and scalable solutions for specific water quality challenges in India.

Research areas

Water quality mapping and tools for monitoring

To understand the health of local water bodies, water quality testing of the seasonal stream N-Choe has been initiated. Starting with conventional parameters, the measuring and mapping activity is being expanded to cover a broad range of water quality parameters to help develop customized treatment solutions. The tools for monitoring include autonomous robots and cost-effective sensors. CWS has deployed an underwater vehicle in a controlled environment (swimming facility) and analyzed the navigation and sensing capabilities of the vehicle. The center is also developing a hand-held optical sensor prototype for Chromium (Cr) detection with remote-access feature.

At IVCCE, faculty and researchers work to create a sustainable future for all



Resource efficient wastewater treatment

CWS is working on membrane separation processes for industrial wastewater treatment targeting reduction of high energy consumption in zero-liquid discharge technologies. Microalgal technologies are also being explored for energy efficient treatment of domestic wastewater.

Application of AI models

The operation of Sewage Treatment Plants (STPs) is often not optimal. CWS has used the Plaksha STP as a testbed and collected data on water quality, chemicals consumed and energy usage, digitized the data, and worked on initial correlations between the operational parameters and treatment performance.



Scan to know more about Center for Water Security



Water balance and water quality in drinking water treatment plant (WTP) and sewage treatment plant (STP) are monitored on campus



Water quality sensors are used for monitoring the N-Choe stream

Center for Sustainable and Precision Agriculture

Agriculture is intricately connected to the nexus of food, water and energy, which is essential for sustainable development. The Center for Sustainable and Precision Agriculture (CSPA) aims to transform the Indian agricultural ecosystem by developing groundbreaking technologies in AI-ML, Robotics, IoT and Biotechnology. The center's mission is to utilize these technologies to sustainably double the yield of Indian farms.



Drone-based monitoring can make a positive impact on farming with potential towards improving crop yields and environmental sustainability

Research areas

Remote sensing for crop stress and yield assessment

CSPA is employing drone and satellite-based remote sensing to estimate sugarcane yield and detect plant water and nitrogen stress. By providing farmers with objective data on soil and crop conditions, the center enables timely actions to enhance productivity.

Development of low-cost IoT sensors and biopesticides

CSPA is developing affordable IoT sensors for sucrose measurement in sugarcane, making them 100 times cheaper than current lab instruments. This aids farmers and sugar mills in optimizing harvest times and reducing post-harvest losses. Additionally, it is creating viable biopesticide alternatives to reduce the overuse of chemical pesticides in Punjab, promoting safer farming practices.

Impact of biochar on soil health

Studies assess how different concentrations of biochar, with or without legume plants, affect soil health indicators like pH, moisture content, electrical conductivity, soil organic carbon, and nutrient availability. This research aims to enhance soil structure, nutrient retention, and microbial activity, contributing to sustainable agriculture.



Center for Equitable and Personalized Healthcare

The Center for Equitable and Personalized Healthcare (CEPH) is on a mission to spawn the next epoch in bio-informed technologies to improve disease diagnosis and elucidate individualized susceptibility to enable personalized treatment decisions.



Research areas

Next generation point-of-care diagnostics

CEPH aims to develop cost-effective precision diagnostic devices and early detection platforms for non-communicable disease (NCD) management that are on the rise in India and globally. The current studies assess biomarkers in body fluids that analyze accurately multiple disease conditions, besides designing multimodal sensors for their sensitive and selective detection, and the corresponding lab-on-chips. Integrating the advancements in omics data analysis, building Al tools to annotate, identify and summarize medical procedures are expected to improve disease diagnosis and management.

Disease mechanism and susceptibility elucidation at individual level

Identifying molecular signatures for cancer, rare diseases, heart and neurodegenerative disorders that can be developed into novel biomarkers for NCDs enabling personalized diagnostics is targeted here. Integrative multiomics and functional validation of biomarkers are integral to this approach.

Mechanism guided personalized therapeutics

Impact of small molecule inhibitors and chemical moieties for cancer therapeutics will be undertaken using proteomics-based assays. This will be followed by predicting their pharmacokinetic properties and modelling drug response in association with molecular marker presence.

Natural biomaterial based implantable bio-grafts will also be developed for rapid healing of diabetic foot ulcers in terms of revascularization, tissue integration and facilitate drug release. Along with non-invasive real-time monitoring, this should revolutionize the treatment of chronic wounds, reducing the necessity of amputations and decreasing healthcare costs globally.



CEPH engages in interdisciplinary research to gain insights in complex health challenges

Research Labs & Facilities



Dixon IoT Lab

Dixon IoT Lab is a state-of-the-art facility supported by Dixon Technologies (India) Limited. It has been set up to play a pivotal role in advancing research and innovation in the field of IoT and aspires to design affordable and scalable IoT solutions through collaboration with industry partners. The Dixon IoT Lab provides IoT support to research centers such as CSPA, IVCCE and CWS. At CWS, tools for monitoring is a key theme and has synergy with the lab.

The Punjab Police signed an MoU with Plaksha to leverage research and innovation at the Dixon IoT Lab for enhanced road safety and sustainable transport practices in Punjab.





The Dixon IoT Lab is equipped with cutting-edge resources including sensor prototyping and precision measurement equipment, edge computing and PCB design tools



The Dixon IoT Lab will drive technological advancements and foster skill development in the IoT domain

Robotics Lab

Plaksha Robotics Lab is a cutting-edge research facility inside the HDFC Innovation Hub. It is equipped with state-of-the-art equipment for pursuing research in aerial, underwater and field robotics. The lab focuses on various research projects like applying advanced drone technology to enhance precision agriculture practices and developing specialized underwater robots designed for monitoring and analyzing aquatic ecosystems. It also provides Plaksha students an inviting atmosphere to immerse themselves in hands-on experiences, engaging in projects that involve building drones and robots, conducting innovative research, and participating in exciting hackathons.



Human-Technology Interaction Lab

The Human-Technology Interaction (HTI) Lab is dedicated to advancing the understanding and optimization of interactions between humans and technology. The mission is to investigate and model these interactions to improve cognitive well-being, develop cost-effective wearable solutions, and provide policy recommendations that enhance human safety, productivity and creativity. Four research papers by HTI have been accepted at prestigious conferences such as the International Conference on Science and Technology Education and the American Society for Engineering Education Conference.

Lab for Economic Behavior in Organizations

The Lab for Economic Behavior in Organizations (LEO) aims to investigate through a social science lens issues pertaining to human resources in public and private organizations. LEO's vision is to innovate in and learn from the latest scientific advances in the areas of personnel, behavioral, experimental and organizational economics to provide actionable insights for addressing the grand challenges of India and the world.

Digital Twin Technology Lab

It is an interdisciplinary research and innovation lab that specializes in digital twinning and simulation of real-world systems. It uses mathematical technology, state of the art Al engines, and advanced computer graphics to create interactive platforms for learning and to develop predictive models for optimal decision-making. The lab is also developing novel strategies for training deep neural network models that will offer a fundamentally new perspective on how machines and humans learn.

Advanced Analytical Characterization Facility

Advanced Analytical and Characterization Facility (AACF) houses instruments for performing chemical analysis. Techniques include spectroscopy, chromatography, polarimetry and fluorescence microscopy. It is a shared facility and is used by all research centers at Plaksha. AACF also houses a Biosafety Level – II lab, which is a microbiology lab. It is currently used for culturing fungal and pathogenic organisms. It is equipped with a BSL2 hood, a chemical hood, a refrigerator, a shaker incubator, a working bench and a sink. Ongoing projects focus on developing biosensors for detection of fungal plant diseases and biopesticides for sustainable management of fungal crop pathogens. In near future, the facility will be expanded to cater to fluorescence spectroscopy and X-ray diffraction analysis.



The Havells Research Building at the Mohali campus houses pathbreaking labs and facilities dedicated to fostering experiential learning and interdisciplinary research

Research Publications



Research Articles

Year 2021

- Guo, N., Bose, S. K., Mukherjee, B., & Shen, G. (2021). Impact of fiber attenuation and effective area on spectrum efficiency of elastic optical networks. Journal of Lightwave Technology, 40(8), 2200-2213.
- Goyal, S., Kapadia, S. J., & Ajith, P. (2021). Rapid identification of strongly lensed gravitational-wave events with machine learning. Physical Review D, 104(12), 124057.

Year 2022

- Kumar, V., Goyal, V., Mandlik, R., Kumawat, S., Sudhakaran, S., Padalkar, G., Rana, N., Deshmukh, R., Roy, J., Sharma, T.R. and Sonah, H., (2022). Pinpointing genomic regions and candidate genes associated with seed oil and protein content in soybean through an integrative transcriptomic and QTL meta-analysis. Cells, 12(1), 97.
- Raturi, G., Sharma, Y., Mandlik, R., Kumawat, S., Rana, N., Dhar, H., Tripathi, D.K., Sonah, H., Sharma, T.R. and Deshmukh, R., (2022). Genomic landscape highlights molecular mechanisms involved in silicate solubilization, stress tolerance, and potential growth-promoting activity of Bacterium Enterobacter sp. LR6. Cells, 11(22), 3622.
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Year 2022

- Sinha D, Amaratunga GA. (2022) Symmetry breaking in transformation of force fields. InExplicit Symmetry Breaking in Electrodynamic Systems and Electromagnetic Radiation (Second Edition). IOP Publishing. 2053-2563, 5-11.
- Sandhu, K., & Singh, S. (Eds.). (2022). Food Printing: 3D Printing in Food Industry. Springer.
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Book Chapters

Year 2022

* Sinha D, Amaratunga GA. (2022) Chapter 5. Symmetry breaking in transformation of force fields. In Explicit Symmetry Breaking in Electrodynamic Systems and Electromagnetic Radiation (Second Edition). IOP Publishing. 2053-2563, 5-11.

Year 2023

- Gupta, M., Dhingra, G., & Sandhu, K. (2023). Human podiatric disabilities and their correction using a 3D printed technology: a short review. 3D Printing in Podiatric Medicine, 175-194.
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List of current sponsored projects



FY 2022-23

- Designing highly specific immunotherapeutic through structure-based cytokine engineering: A combined in silico and deep learning approach Dr. Monika Sharma (Anusandhan National Research Foundation (ANRF)- formally known as SERB)
- Improvement in silicon uptake, fruit ripening and yield by targeting multiple genes (SINIP2-1, SIAP2a, SP5G, and PL) with CRISPR/CAS9 approach in tomato- Dr. Rupesh Deshmukh [Department of Biotechnology (DBT)]
- Digital Solution to predict optimum time of sugar harvest- Dr. Amruta Ranjan Behera & Dr. Shashank Tamaskar [Software Technology Park of India (STPI)-Mohali]
- Investigations of molecular mechanism and dynamics of splice site recognition in humans Dr. Monika Sharma (Anusandhan National Research Foundation (ANRF)- formally known as SERB)
- Design and implementation of a Cyber-Physical system for high throughput phenotyping and real time management of crops in the mid-Himalayan region -Dr. Srikant Srinivasan [Department of Biotechnology (DBT)]
- High-throughput phenotyping technologies for agricultural crops Dr. Srikant Srinivasan (ARNETTA Tech)

FY 2023-24

- Investigating impact of current agricultural practices on planetary health and co-creating sustainable solutions with farming communities- Dr. Navjot Kaur [DST iHub - AWaDH (Agriculture & Water Technology Development Hub)]
- Team Spectral EYE Dr. Amruta Ranjan Behera (Department of Consumer Affair)
- Understanding the molecular basis of selective transport of silicon and arsenic by modulating Nodulin 26-like Intrinsic protein 2-1 (NIP2-1) in rice (Oryza sativa) Dr. Rupesh Deshmukh (Anusandhan National Research Foundation (ANRF)- formally known as SERB)
- Optical sensor for chromium detection in remote and rural waterbody and industry water outlet for near zero discharge and their field testing – Dr. Chaitanya Lekshmi Indira [Department of Science and Technology (DST)]
- National Science Day celebration-2024-Dr. Amrik Sen (Punjab State Council for Science and Technology, Punjab)
- Study of neuronal information for navigation- Dr. Subhasis Ray (Anusandhan National Research Foundation (ANRF)- formally known as SERB)
- Setting up of Intellectual Property Management & Commercialization Cell (IPMCC) Dr Vivek Deulkar [Punjab State Council for Science and Technology, Punjab]

Sponsored Research Projects: CSR

FY 2022-23

• Indorama Ventures Centre for Clean Energy - Prof. Vishal Garg, Dr. Shashikant Pawar, Dr. Anupam Sobti, Dr. Vivek Deulkar (Indorama Ventures)

FY 2023-24

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- IOT Lab Development Dr. Srikant Srinivasan, Dr. Dhiraj Sinha, Dr. Amruta Ranjan Behera (Dixon technologies India Ltd)
- Smart Farm- Dr. Shashank Tamaskar [CNH Industrial (India) Private Limited]

Research Consultancy

FY 2022-23

• Case study for district cooling guideline by Vishal Garg [Foundation for ISHRAE]

FY 2023-24

- Sugarcane health and yield prediction using Al/M Dr. Shashank Tamaskar & Dr. Amruta Ranjan Behera (CNH-Research Project)
- Estimating Temperature Reduction with Application of Cool Roofs using Dynamic Simulation- Dr. Vishal Garg (HIL India Limited)

Plaksha University Startup Research Grant

FY 2022-23

- Energy Efficient Water Waste Management using Forward Osmosis- Dr. Prashanth Kumar
- Multi-scale Models for Understanding dispersion of atmospheric air pollution and designing energy efficient engineering materials with a periodic order- Dr. Amrik Sen
- Elucidating the mechanisms of alternative splicing in cancer- Dr. Monika Sharma
- Teach Box Proposal: Al-powered tool for faculty to develop deeper insights of the teaching challenges faced by engineering faculty in India and to co-create solutions with, rather that only for the faculty- Dr. Rucha Joshi
- Road and Wheel Monitoring System Using an Integrated Infra-Red, Microwave and Acoustic Sensors-Dr. Dhiraj Sinha
- Controlling overuse of chemical fertilizers and pesticides in Punjab via CRISPR crops- Dr. Navjot Kaur
- Experimental Investigations of the effect of urbanization on micro-climates- Dr. Shashikant Pawar
- Precision Agriculture & Border Surveillance using Unmanned Aerial Vehicles- Dr. Shashank Tamaskar
- Development of Miniaturized Sensing Platforms for Detection and Quantification of Chemicals- Dr. Amruta Ranjan Behera
- Investigation of insect navigation, and its application to biomimetic A.I.- Dr. Subhasis Ray
- Systematic targeting of DNA repair pathways to design novel anti-cancer therapy and in-house development of CasRNPs for genome editing. Dr. Swagata Halder
- Multirobot systems for better understanding of Environmental Processes- Dr. Sandeep Manjanna
- Topics in Macroeconomic Development- Dr. Kriti Khanna
- Development of Sustainable pipeline for rapid advancement of rice varieties by introducing novel traits with genome editing approach- Dr. Rupesh Deshmukh

FY 2023-24

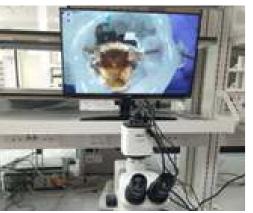
- Electrochemical Sensing of Catecholamines: A Potential Non-invasive Technique for Early Detection of Hepatocellular Carcinoma (HCC)- Dr. Chaitanya Lekshmi Indira
- Post-Quantum Signatures for Practical Applications- Dr. Tapas Pandit
- Intelligent use of battery storage system for harnessing renewables, managing uncertainties and incorporating demand response services- Dr. Vivek Deulkar
- Trade, Financial Intermediation, and the Macroeconomy- Dr. Tanmoy Majilla
- Scalable Agri Informatics with Computer Vision- Dr. Anupam Sobti
- India's First Human Technology Interaction Lab- Dr. Siddharth S
- Digital Terrascope- Dr. Srikant Srinivasan
- Lab for Economic Behaviors in Organizations (LEO)- Prof. Prakarsh Singh

Major research facilities (common / lab wise)













Analytical Analysis Characterization facility







Indorama Ventures Center for Clean Energy











PROCESS ROOM ANALYTICAL ROOM PHOTOBIOREACTOR ROOM





















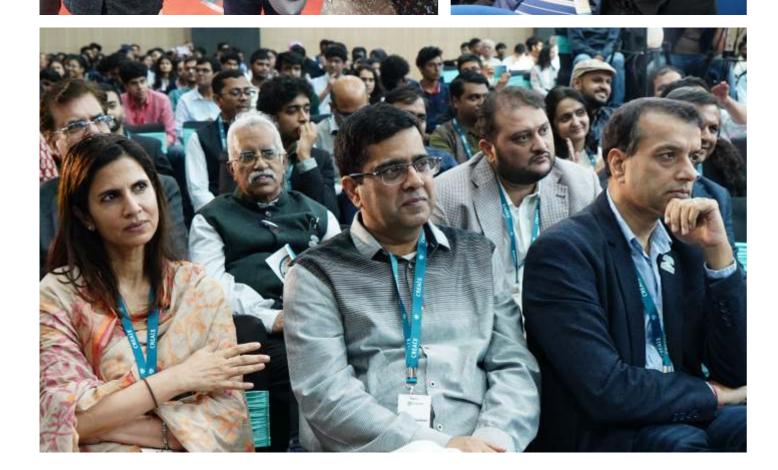


















Plaksha students are equipped not only to tackle the world's grandest challenges but to thrive personally and professionally. With a focus on wholistic wellbeing, students are empowered to manage stress, and cultivate resilience, shaping them into visionary leaders for the future.

Sunny Singh Roundglass

Engineering today is more than just solving problems—it is about reimagining the future, and Plaksha is championing this.

Mukul Agrawal
Param Capital

The Havells Research Building is a pivotal step in cultivating a thriving research ecosystem at Plaksha with keen focus on interdisciplinary education.

Anil Rai Gupta Havells India Ltd

Resilient and balanced individuals thrive in all aspects of life. Good mental health and holistic development of students at Plaksha will make them lead with compassion and purpose.

Sunil Goyal MCKS Trust Fund

We want to foster an entrepreneurial mindset in youth, empowering them to innovate with limited resources.

Harveen Bedi Info Edge India Ltd



Scan to witness Founders Day 2023

Activating employment pathways for girls and women into STEM unlocks untapped potential, drives equal opportunities, and overall improves economies. At Mphasis, we are proud and dedicated to investments in sustainable, innovative models that invigorate entrepreneurship avenues; thus, break barriers to labor markets with safe opportunities to address time poverty and connectivity barriers. We are confident that the Plaksha STEM education will equips them with skills for the future and delivering lasting benefits.

Deepa NagrajMphasis

Clean Energy research at Plaksha represents a meaningful step towards sustainability, reflecting our shared commitment to a cleaner and greener future.

> Suchitra Lohia Indorama Ventures PCL

Education is the most powerful tool we can offer to shape brighter futures. By providing scholarships to deserving students at Plaksha, we are investing in a generation of changemakers.

PD Mundhra eClerx

Plaksha understands that in today's interconnected world, cultivating a global mindset is crucial for students to maximize career opportunities and truly thrive.

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Jefferies Finhub at Plaksha should emerge as the first port of call for any global capital market player looking for talent in India or abroad.

> **Brijmohan Soni** Jefferies India Pvt Ltd

We want young minds to explore solutions that can revolutionize healthcare, agriculture and sustainability.

Dr. Rajesh Nair Indegene

We are committed to building environments where students can learn, grow, and thrive. Supporting Plaksha University's hostel is our way of helping create a foundation for the next generation of changemakers.

Motilal Oswal Financial Services Ltd

The collaboration is a testament to our commitment to innovation and the shared vision of contributing to India's growing potential in biotechnology.

Sangeeta Sriram Molbio Diagnostics

Fundraising

Plaksha's sponsoring body is called Reimaging Higher Education Foundation (RHEF). RHEF is a not-for-profit, Section 8 Company, registered under Section 80G and 12AA of the Indian Income Tax Act 1961.

Plaksha is built on the model of collective philanthropy. Philanthropic contributions have been made by over 100 individuals from around the globe, as well as Indian corporates through their CSR initiatives, and a handful of foundations, forming a diverse global founding community.

The university has secured financial commitments exceeding ₹1100 crore till date. These funds have been allocated to advance institutional development, endow faculty chairs positions, and promote research and innovation through the establishment of research centers, labs and groups. Additionally, these commitments facilitate scholarships and support to ensure equal opportunities for students from diverse backgrounds.

Individuals and organizations who have contributed to the funding, above a certain threshold, are honored as Distinguished Trustees of the university. Contributions from others are recognized as Founders and Trustees, Founders, and Changemakers.



Board of Trustees*

The Board of Trustees is the apex decision making body of RHEF. Along with the academic leadership of Plaksha, the Board of Trustees has been involved in envisioning and making key decisions for the university.

Distinguished Trustees

Ambarish Raghuvanshi HT Parekh Foundation Rakesh Bharti Mittal (Bharti Airtel Foundation) Anil Rai Gupta & Jai Rajpal Suchitra Lohia Ameet Gupta (Havells) Madhusudan Kela (Indorama Ventures) Ashish R Kacholia Motilal Oswal & Sunny Singh Varna Puvvada & Raamdeo Agrawal Gagan Hasteer (Motilal Oswal Foundation)

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*As of September 30, 2024

Harish Bahl

Corporates*

Many corporates have partnered with Plaksha for the construction of infrastructure, research centers and laboratories. They support scholarships, fellowships for students, faculty development and the creation of faculty chair positions.









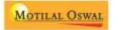




































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Effective university governance is crucial for fostering an environment of accountability and transparency. It not only enhances institutional integrity but also empowers faculty, students and executives to collaboratively shape the future of education and research

Ambarish Raghuvanshi Info Edge India Ltd



102

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The Governing Body

The Governing Board is the apex decision-making body of the university and is headed by the Chancellor and comprises the Vice Chancellor, external experts, government representatives and nominees of RHEF. The university management is done by the Governing Body, the Chancellor and the Vice Chancellor (both of whom are senior academicians). The Chancellor is the Chair of the Governing Body and the Vice Chancellor is akin to the CEO of the university taking all day-today decisions.

S Shankar Sastry Chairperson

SK Jain Rudra Pratap

Administrative Secretary to the Neeraj Aggarwal Govt of Punjab

Hitesh Oberoi

Eminent Educationist Rakesh Bharti Mittal

nominated by Secretary to the Manas Human Govt of Punjab, Dept of Higher

Education* Ashish Gupta

Sanjay Bhatnagar Sumita Ambasta

Board of Management

The university also has a Board of Management (BoM) chaired by the Chancellor and comprising the Vice Chancellor, Deans, senior members of university leadership and some nominees of RHEF.

S Shankar Sastry Chairperson

Rudra Pratap Alok Mittal

Ambarish Raghuvanshi

Meeta Malhotra

Mohit Thukral

Mukul Agrawal

Pallavi Jain

Vikrant Bhargava

Director, Higher Education,

Punjab (Ex-officio)

Nandini Kannan

Vishal Garg

Srikant Srinivasan

Rucha Joshi

Sanjay Bhatnagar

Finance Committee

The Finance Committee is responsible for the approval of the annual budget of the university. It tenders advice to the Vice Chancellor on financial matters. The chief accounts and finance officer is responsible for the preparation of the annual budget and the preparation of the accounts of annual income and expenditure of the university.

Rudra Pratap Chairperson

Ambarish Raghuvanshi

Lalit Agarwal Nandini Kannan Sanjay Bhatnagar **Umesh Sharma**

Academic Council

The university also has an Academic Council which is the principal academic body of the university. It regulates, coordinates and exercises general supervision over the academic policies of the university.

Rudra Pratap Chairperson

Nandini Kannan

Vishal Garg

Srikant Srinivasan Monika Sharma

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Academic Advisory Board

Plaksha's academic vision and programs are guided by a distinguished Academic Advisory Board. They are eminent academicians and thought leaders from across the globe – each at the forefront of transforming education in their respective institutions.

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Visiting Faculty

Kriti Khanna

Alexander Fred-Ojala Hanumant Singh Ananda Sen Gupta Jitesh Panchal Andy Ruina Ken Singer Ankur Nahar Kriti Manocha M Balakrishnan Anuj Kapoor Dwight Jaggard Moor Xu Gurman Bhatia Pankaj Pansari

Raghavendra Singh Rajeev Barua Rajesh Sharma Ravi Jasuja Sumita Ambasta



Executive Leadership*

An experienced leadership team manages the growth of programs, admissions, fundraising, administration, finance and other functions at Plaksha.

Rudra Pratap

Founding Vice Chancellor

Nandini Kannan

Professor,
Dean - Academics,
Director – Data Science Institute

Vishal Garg

Professor,
Dean - Research,
Director – Indorama Ventures Center for
Clean Energy

M Balakrishnan

Program Chair – Computer Science & Artificial Intelligence, Advisor – Faculty Affairs & Career Advancement

Arvind Agrawal

Pro-Vice Chancellor

TV Ramanathan

Officiating Registrar

*As of September 30, 2024

Manoj Kannan

Associate Professor, Associate Dean – Academics & Student Wellbeing

Srikant Srinivasan

Associate Professor, Associate Dean – Global Engagements

Prakarsh Singh

Professor, Program Chair – Data Science, Economics & Business

Monika Sharma

Associate Professor, Program Chair – Biological Systems Engineering

Shashank Tamaskar

Associate Professor,
Program Chair – Robotics &
Cyber-Physical Systems,
Director – Center for Sustainable
& Precision Agriculture

Malini Balakrishnan

Professor,
Director – Center for Water Security

Chaitanya Lekshmi Indira

Associate Professor,
Director – Center for Equitable
& Personalized Healthcare

Brainerd Prince

Associate Professor,
Director – Center for Thinking, Language
& Communication

Suresh Kumar

Professor, Director – Doctoral Program

Sarika Gupta Bhattacharyya

Vice President – Institutional Advancement & Partnerships (RHEF)

Rajiv Khosla

Vice President – External Engagement

Jitin Sahni

Chief Operating Officer

Nimrata Kapoor

Chief Human Resources Officer

Kanchi Khanna

Senior Director – Admissions

Umesh Sharma

Chief Finance & Accounts Officer

Srabani Ghosh

Director – Office of Corporate Partnerships & Careers

Vikram Patel

Director - UG Outreach

Nina Mehta

Director – Brand & Communications

Arun Sharma

Director - Projects (RHEF)

Ankur Mehta

Associate Director – Info Edge Center for Entrepreneurship



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