

## “We have signed over 150 MoUs with institutions and corporations, globally”



Starting as one of the best aviation institutes in India and run by the prestigious Hindustan Group of Institutions, today the group offers an impressive array of multidisciplinary programs. I had the pleasure of spending quality time with **Dr. Anand Jacob Verghese, Chancellor - Hindustan Institute of Technology & Science and Chairman - Hindustan Group of Institutions** and getting more insights on the institutions run by him and the educational system in general. We are carrying this in depth interview in two parts. **Excerpts**

### How did the concept of starting an educational institution originate?

The origin of our educational institution is rooted in a profound vision of our founder Chairman, Dr. K.C.G. Verghese, who firmly believed that education is not merely about academic learning, but about creating opportunities for individuals to rise above their circumstances and realize their full potential.

In the early days, our founder was deeply concerned about the limited access to quality education, particularly for marginalized and economically disadvantaged communities. He observed that education was the most powerful tool for social mobility, but it remained out of reach for many. This realization sparked a passionate commitment to create an educational ecosystem that would break down barriers and provide comprehensive learning opportunities.

The concept emerged during a time of significant social and economic challenges. Our founder believed that education should not be a privilege for a select few, but a fundamental right for everyone. He was inspired by the transformative power of knowledge – how it could change individual lives, strengthen communities, and contribute to national development.

Key principles that guided the institution's establishment included inclusive world-class education, holistic development of students, emphasis on practical skills alongside theoretical knowledge, creating pathways for students from all backgrounds and fostering innovation and critical thinking.

The motto "To Make Every Man a Success and No Man a Failure" was not just a slogan, but a deeply held philosophy. It reflected a radical approach to education that saw potential in every individual, regardless of their social, economic, or cultural background.

Initially started with limited resources but unlimited passion, the institution began as a small training institute-HIET. Over time, it grew through the dedication of its founder, leaders, teachers, and

the communities it served. Each success story and each student who transformed their life through education became a testament to the founding vision.

Today, our institution stands as a living embodiment of those original dreams – a place where education is a powerful instrument of personal and social transformation, continuing to break barriers and create opportunities for generations of learners.

### What are the core strengths of your University?

Our university is built on a multifaceted approach towards holistic education that extends far beyond traditional academic boundaries. Our core philosophy looks towards nurturing not just the academic and intellectual capabilities of individuals, but also the hidden potential of each student.

Academic and research excellence form the cornerstones of our institutional strength. Our world-class faculty, comprising seasoned researchers, world-class scientists, academicians and industry experts, bring a wealth of knowledge and practical experience to the classroom. Five of our faculty members even featured in the top 2% scientist's worldwide survey conducted by Stanford.

The industry-integrated curriculum, designed by industry leaders including IBM, GARC, LSC and more, is meticulously designed to be both cutting-edge and adaptable, ensuring students receive education that is globally competitive and is applicable in real-world scenarios. We also offer dedicated research centers, seed funding for innovative projects, and robust support for patents and publications to encourage students and faculty alike. HITS is credited with over 5200+ publications in Scopus and H-Index; 24,000+ citations and 120 credited patents.

We strongly believe in the concept of industry-academia interactions and have forged robust collaborations with leading corporations and organizations, creating an ecosystem where academic learning seamlessly integrates with professional requirements. Mandatory internship programs, industry-designed



coursework/programs, industry established labs powered by IBM/Q-Max and regular talks and workshops by corporate leaders ensure that our students are not just academically prepared, but professionally equipped to face the challenges of competitive job markets globally.

The student-centric environment that recognizes and nurtures individual potential remains our most distinguishing feature. Our comprehensive support system includes personalized mentorship, experiential learning, student counselling services and scholarship programs.

Technology and infrastructure play a crucial role in our educational model. State-of-the-art labs, advanced digital platforms, modern research centers of excellence, well-stocked digital library and technology-enabled classrooms create an environment that promotes innovative learning. Our university's state-of-the-art aviation campus also has hangars with Cessna Planes and Chetak Helicopters to provide real-world training.

We have signed over 150 MoUs with institutions and corporations, globally. Key collaborators include Cranfield University (UK), Dongguk University (South Korea), Airbus (Europe), Boeing (US), and Moscow Aviation Institute (Russia). This global exposure includes International exchange programs, multicultural campus, foreign language learning and collaborative research opportunities that prepare our students to be global citizens.

Perhaps most importantly, we remain committed to social transformation and empowerment. Our education goes beyond academic and professional skills, focusing on developing responsible global citizens. Our commitment towards Sustainable Development Goals (SDGs) encourages community engagement programs, sustainability initiatives, research on clean energy/hydrogen tech, green campus bolstered by solar panels and bio gas plants and value-based education to ensure that our students understand their broader societal and environmental responsibilities.



These core strengths are not just institutional attributes but a reflection of our fundamental belief: education is a transformative journey that empowers individuals to create meaningful change in the world.

### Any Unique Courses that you would like to highlight?

HITS offers an impressive array of multidisciplinary programs that stand out in the educational landscape. Our flagship programs include Aeronautical Engineering,

Aerospace Engineering, Computer Science Engineering and Management that provide cutting-edge training to aspiring leaders and innovators in their respective field.

We also offer unique programs that are at the forefront of innovation and industry relevance including Digital Manufacturing, Smart Grid and Electric Vehicles, Microelectronics, and VLSI Design. These programs are designed to meet the demands of industries such as semiconductors, electronics, and automation.

**We are at the forefront of emerging fields with programs in machine learning, IoT, Cloud Computing, Block Chain, Cyber Security, Defence Technologies, Urban Planning and FinTech, which align with current industry demands.**

The university has strategic partnerships that enhance its offerings, such as aviation services and air cargo and logistics programs in collaboration with Logistics Sector Skill Council, IBM Collaborated CSE and Business Analytics programs, Health Management program with Sankara Nethralaya, IMAX and Kavery Hospital collaborated customized health science programs and smart mobility initiatives with GARC. These programs deliver industry-specific expertise/training and students are career-ready.

With a goal towards catering to diverse interests and providing students with opportunities to pursue specialized careers, we also offer unique programs in Sports Management, Communication Design, Industrial Design, User Experience Design, Food Technology, Transportation Planning and Public Administration. The inclusion of Christian Studies in the curriculum fosters spiritual growth and ethical values, complementing the academic and professional development of students.

These diverse and targeted programs demonstrate HITS' commitment to preparing students for emerging and specialized career paths in various high-growth sectors.

### With your vast experience, how do you see the changes in our Indian education system, especially higher education?

The Indian Higher Education system has undergone a significant change in the last two decades. Driven by technological advancements, global competitiveness, changing workforce demands and the challenges of the COVID-19 Pandemic, higher education today has become more flexible, accessible and dynamic.





While COVID-19 pandemic accelerated the adoption of online and hybrid learning models, the National Education Policy 2020 (NEP 2020) further supported this trend. With a need to improve access to quality education, especially in remote and underserved areas, online learning has emerged as a powerful tool. Use of online platforms and Massive Open Online Courses (MOOC) has further bridged the geographical divide, providing equal opportunities to learners across the country.

There has been a marked shift from traditional theoretical learning to more practical, skill-based education. Our modern education ecosystem encourages multidisciplinary and interdisciplinary learning that hones versatile skill sets that align with industry requirements. Students now have more opportunities to explore diverse fields, combining disciplines like technology with humanities, or engineering with management. At our university, we offer honors programs that allow students to pursue a specialized course of study in their chosen field and develop expertise in a specific area. Additionally, the minors program allows students to opt for secondary area of study that complements a student's major field of study. It allows students to explore additional interests outside of their primary academic focus and gain knowledge in a different discipline. Vocational training, internships, and industry collaborations have also become more prominent.

The government's vision of "Viksit Bharath" aims to drive innovation by increasing government and private sector investments in research infrastructure. Initiatives like 'Startup India' and 'One Nation One Subscription (ONOS)' fosters a culture of innovation, entrepreneurship and interdisciplinary research excellence across India's higher education ecosystem.

In today's interconnected world, international collaborations have become essential for academic institutions to thrive. International collaborations, exchange programs and adopting global education standards, broaden student horizons and prepare them for international career opportunities.

The rapid evolution of technology has also necessitated a shift in higher education. Universities are constantly updating their curriculum, increasingly incorporating courses in emerging technologies like artificial intelligence (AI), data science, cyber security, IoT, machine learning and



blockchain into their curriculum, aiming to equip students with the skills and knowledge needed for the 21st century.

There is also an emphasis towards accessible and inclusive education. Scholarships, ONOS and digital learning platforms are helping marginalized communities access quality education.

However, challenges remain. We are still plagued by issues like infrastructure gaps, quality disparity between institutions, and the need for continuous skill upgradation. To address the dynamic needs of a rapidly changing world, the Indian higher education system must continually evolve into a more adaptive, innovative and globally competitive ecosystem.

#### Any innovative teaching methods you have implemented?

At HITS, students benefit from an academically robust and flexible learning environment and multifaceted teaching pedagogies that prioritize skill development, active student engagement and real-world preparedness, all while encouraging creativity.

Hindustan has embraced a unique system that perfectly blends together traditional classroom practices with technological interventions facilitating in-depth learning, up-skilling and better outcomes. The highly flexible system also incorporates project-based learning, where students are encouraged to work on projects from their first year. The projects afford students an opportunity to apply their knowledge and skills to complex, real-world challenges, building confidence and expertise.

With the introduction of Outcome Based Education (OBE), the student-centric learning model that focuses on defining specific learning outcomes or goals for students and then designing the curriculum, instructional strategies and assessment methods to help students achieve those outcomes, there is a shift of focus from traditional teacher-centric methods. OBE recognizes that there is no one-size-fits-all approach to teaching and assessment. Instead, classes, learning opportunities, and assessments should be designed in ways that best support students in achieving the specified outcomes. The role of the faculty adapts into trainer, facilitator and mentor based on the outcome targeted.

The choice-based credit system, industry-integrated curriculum and value added honors and minors provide students unprecedented academic flexibility, allowing them to customize their learning paths, explore interdisciplinary interests, and develop personalized academic trajectories that reflect individual career aspirations.

Our universities are making significant strides in internationalizing their campuses. By collaborating with industry leaders and institutions worldwide, they are ensuring a high-quality education for their students. Faculty exchange and research collaborations ensure that the teachers gain exposure to diverse pedagogical approaches, innovative teaching techniques, and cutting-edge research. They also foster a more inclusive and global mindset among faculty ensuring that they create graduates who are world-ready and job-ready.

Hybrid teaching models that

are increasingly sophisticated and blend online and offline instructional methods are being increasingly adopted across our university. These tend to create dynamic, accessible educational experiences that accommodate diverse learning styles and technological capabilities. The holistic and adaptive educational ecosystems that are created by these innovative approaches prepare learners to navigate complex professional landscapes with creativity, critical thinking, and practical expertise.

#### R&D is very important for the success of any university. How much do you invest, especially for research in emerging areas?

HITS has established itself as a leading research institution, committed to pushing the boundaries of knowledge. Over the years, our university has established a comprehensive and cutting-edge research infrastructure, evidenced by over 600 Research Scholars, more than 5,500 research publications in Scopus and H-index, 24,000 citations and 260 patent filings.

HITS has demonstrated a robust and strategic approach to research and development (R&D) with significant investments across multiple emerging technological domains. HITS has set-up 16 specialized Research Centers of Excellence & Skill/Training Centers focusing on cutting-edge domains such as clean energy, underwater communication, machine learning, cyber security, simulation, robotics, hydrogen technology, space research, digital health, and artificial intelligence. It has also partnered with industry leaders such as IBM and Q-Max to launch laboratories with advanced equipments and software.

The recent addition to HITS is the Centre for Hydrogen Technologies and Carbon Utilization (CHTCU) that aspires to play a pivotal role in enabling the transition to a low-carbon economy by pioneering sustainable practices, fostering technological breakthroughs, and shaping policies for a carbon-neutral future. Through its initiatives, CHTCU is committed to advancing global efforts toward climate resilience and energy equity.

The success of the Structural Impact Crash Simulation Centre (SIMCRASH), culminated in the establishment of two laboratories in collaboration with Naval Science and Technological Laboratory in February 2024. This has opened new avenues in Swarm Intelligence and Underwater Internet of Things, with significant funding opportunities through Naval Research Boards.

In addition to this, HITS has two incubation centers that promote innovation and entrepreneurial spirit among students and faculty alike. Every year, special seed funding is provided for startups in their early stages of development. From validating a business idea, developing a minimum viable product (MVP) to securing initial traction, seed funding can give startups the initial boost and can lay the foundation for future growth and success.

HITS' research strategy is distinguished by strategic

collaborations with premier institutions like Cranfield University UK, IIT Madras, and international partners and gaining substantial support from government agencies like SERB, DST, NTSL and DRDO. The investment goes far beyond monetary resources, emphasizing on creating an ecosystem of innovation that addresses complex global challenges through interdisciplinary research.

By creating centers of excellence in emerging technological areas and fostering an environment that encourages scholars to transform curiosity into impactful discoveries, HITS is positioning itself as a leader in technological innovation. The institution's approach is fundamentally about creating meaningful impact, bridging academia and industry, and contributing to national technological advancement.

#### Scholarships are vital, especially for EBC (economically backward class) students? What provisions do you have?

The motto "To Make Every Man a Success and No Man a Failure" finds its most tangible expression through HITS' comprehensive scholarship program, transforming an inspirational philosophy into concrete educational support. By offering scholarships worth Rs. 5 crore every year, the institution actively dismantles economic barriers that might prevent talented students from achieving their academic potential.

Our comprehensive scholarship program encompasses multiple dimensions of financial support and is strategically designed to support economically backward class (EBC) and meritorious students across diverse backgrounds.

The K.C.G. Verghese Merit Scholarship is offered to top rank holders in Plus 2 and equivalent examinations with 100% tuition fee waiver. The Dr. (Mrs.) Elizabeth Verghese Girl Empowerment Scholarship is offering to meritorious girl students from disadvantaged backgrounds. Special scholarships are also offered to Children of Defence Personnel and Martyrs, specially-abled individuals and top-performers in university entrance examinations (HITSEE and HITSCAT).

Complete tuition fee waiver, free accommodation and specialized training are offered to high-achieving athletes under the sports excellence scholarships.

Students can also avail scholarships from government institutions and private global intuitions including KEB Hana Bank, Study in India and COMPEX. KEB Hana Bank recently awarded \$10,000 to meritorious students to encourage them to pursue higher education at HITS.

The scholarship program is meticulously structured to provide comprehensive support, ensuring that talented students from economically challenging backgrounds can access world-class educational opportunities. By offering extensive financial assistance and targeted support, HITS enables students from all economic backgrounds to pursue their academic and professional aspirations without being constrained by economic limitations.