Detailed Project Report (DPR) for The Grant of Deemed to be University under Distinct Category: Defence and Advanced Technology

Submitted to
University Grants Commission (UGC)
New Delhi

NPS-NVT Institute of Advanced Technological Studies (NTS)

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Contents

I. EXECUTIVE SUMMARY

In a constantly evolving global security landscape with rapidly changing technological enabled operational environment, the need for a specialized university focussed on the Defence sector in India has become crucial. With increasing geopolitical challenges, the demand for cutting-edge defence technologies, and a focus on self-reliance in defence, research and manufacturing, the nation must nurture a talented workforce capable of addressing the requirement of the rapidly evolving defence sector and enhance India's technological capabilities. "**NPS-NVT Institute of Advanced Technological Studies**" (NTS) with sponsorship from education trusts of NVT Group, proposes the establishment of a deemed-to-be university under the distinct category in Bangalore. NTS will include the following departments with a focus on defence and advanced technologies: Defence Engineering, Computer Engineering & Mathematics, Technology Management & Social Science, Infrastructure and Sustainable Engineering, and Public Policy.

The NVT Group consists of a diverse portfolio of institutions that have significantly contributed to various technology, defence industry and education sectors. The group's journey began in 1994 with the establishment of NVT Quality Certification (NVTQC: nvtquality.com). NVT Quality Certification (NVT QC) is an accredited certification body by ANAB, USA, for Aerospace, Space and Defence standards AS 9100, AS 9110 and AS 9120. NVT QC is also an accredited certification body by NABCB (National Accreditation Board of Certification Bodies), India for Quality Management Systems. NVTQC has certified over 1000 organisations in quality management standards in sectors of Aerospace, Defence, Space and export-oriented industries across India, South East Asia, the Middle East and the US. NVTQC clients include ISRO; various divisions of HAL; research labs of DRDO; Naval Aircraft Yard in Kochi; technology companies like L&T; Tata; Capgemini, and international aviation companies like Etihad and Ethiopian Airlines, among others.

In 2004, recognising the need for technology and management professionals, NVT Group started NVT Quality Educational Trust (NVTQET) to establish globally recognized institutions that set the benchmark for international-standard higher education in management and technology within India. Under the umbrella of NVTQET, the International School of Management Excellence (ISME: isme.edu.in) was set up in Bangalore in 2006, emerging as a premier business school in India with PhD, PG and UG programs in management and technology. Expanding its influence in the education sector, the NVT Group set up KG AND S Quality Education Trust in 2017. Under this trust, two prominent educational institutions

were established - National Public School Whitefield (npswhitefield.com) and National Public School East (npseast.com). The educational institutions of NVT Group have over 3500 students. The group companies of NVT Group are led by KG Garg (*BE, ME Indian Institute of Technology, Roorkee*); Dr Nitin Garg (*BTech & MTech IIT Bombay; MBA, Carnegie Mellon University; PhD IIM Lucknow*); Vivek Garg (*MBA Purdue University; BE NIT Allahabad; PhD ISB (Pursing)*); and Tanuj Garg (*MS Carnegie Mellon University; MBA, Wharton Business School, USA*).

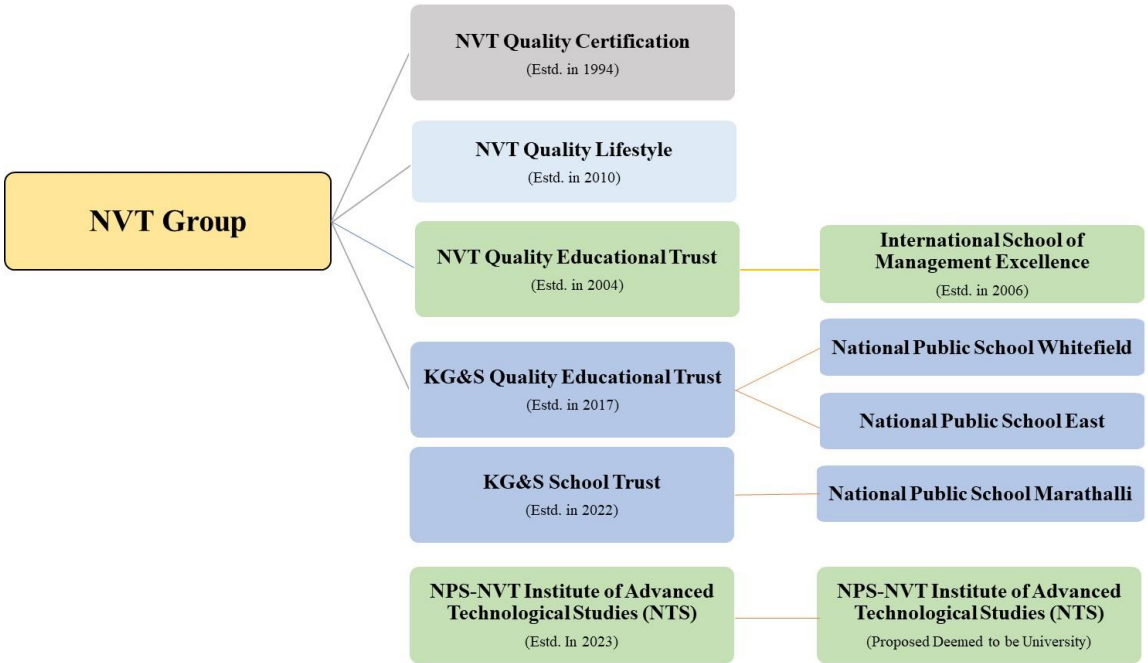
The advisory board of NTS (proposed deemed to be university) consists of eminent professionals from the defence sector and educationists: KG Garg (*Chairman, NVT Group*); Dr Anand Joshi (*Country Policy Advisor, ISDC Global London; Pro-Chancellor Atmiya University; Ex Vice Chancellor CMR University; Ex AICTE, IGNOU & NCTE*); Dr. B.K. Das (*Director General - Electronics & Communication Systems, DRDO*); Dr K.P. Gopalkrishna (*Founder & Chairman, National Public Schools*); R. Madhavan (*Ex-Chairman HAL)*; A.N. Chandramouli (*Director, Aerospace & Aviation Sector Skill Council; Ex-President Bangalore Chamber of Industries and Commerce*); Dr Manohar Sidana (*Ex-Director DRDO*); Major General George Nariamparambil (*Indian Army Veteran & Academician*); Dr Naresh Palta (*CEO Maini Group – Aerospace & Aviation*); Dr Tessy Thomas (*Director General - Aeronautical Systems, DRDO*); Air Vice Marshal Shankar Mani (*Indian Airforce Veteran & Ex-Dean International Relations of Hi Tech University*).

The university aims to focus on inter-disciplinary and multi-disciplinary teaching and research in defence-related technologies to develop talent suited for the defence sector. This will promote indigenous development of advanced defence systems; enable progress in embedded and inter-linked satellite technology; cyber warfare and related offensive, defensive capabilities; reduce import dependency; create job opportunities; and boost economic growth in the rapidly growing aerospace and defence sectors. To fulfil the vision, the university will focus on research, innovation, and industry-academic linkages, creating a breeding ground for technological advancements and entrepreneurship. The university will promote research and innovation by establishing product and technology development centers and centers of excellence in frontier areas. Through global academic collaborations, the university will enhance India's position as a global leader in defence technology. The university also aims to contribute to social transformation through socially responsive educational initiatives, teaching, learning, research, and fieldwork in alignment with the provisions of NEP 2020.

The university's commitment to quality education, experiential skill-oriented learning, student diversity, international exposure and personalized attention will empower students to become confident, skilled, and ethical graduates, contributing significantly to the nation's progress. NTS (proposed deemed to be University) is expected to play a pivotal role in India's journey towards self-reliance and leadership in defence technology.

II. BACKGROUND OF THE SPONSORING BODY

The **NVT Group** is a well-established conglomerate with a diverse portfolio of institutions that have significantly contributed to various technology, defence industry and education sectors. The group's journey began in 1994 with the establishment of **NVT Quality Certification** (NVTQC: nvtquality.com), which has become a reputable and acknowledged name in quality assurance and certification in sectors of Aerospace, Defence, Space and export-oriented industries. In 2004, the group expanded its scope and influence by establishing **NVT Quality Educational Trust** (NVTQET). Under the umbrella of NVTQET, the **International School of Management Excellence** (ISME: isme.edu.in) was set up in Bangalore in 2006, emerging as a premier business school in India. Expanding its influence in the education sector, the NVT Group set up **KG AND S Quality Education Trust** in 2017. Under this trust, two prominent educational institutions were established - **National Public School Whitefield** (npswhitefield.com) and **National Public School East (**npseast.com**).** In 2022, **KG AND S School Trust** was established for third school, **National Public School Marathalli.** The educational institutions of NVT Group have over 3500 students. The group also has a real estate vertical focussed on large high end luxury villa community developments. The group companies have been founded and led by KG Garg (*BE, ME Indian Institute of Technology, Roorkee*); Dr Nitin Garg (*BTech & MTech IIT Bombay; MBA, Carnegie Mellon University; PhD IIM Lucknow*); Vivek Garg (*MBA Purdue University; BE NIT Allahabad; PhD ISB (Pursing)*); and Tanuj Garg (*MS Carnegie Mellon University; MBA, Wharton Business School, USA*).



1. NVT Quality Certification

NVT Quality Certification (NVT QC) is an accredited certification body by ANAB (The ANSI National Accreditation Body), USA, for Aerospace, Space and Defence standards AS 9100, AS 9110 and AS 9120. NVT QC is also an accredited certification body by NABCB (National Accreditation Board of Certification Bodies), India, for Quality Management System standards. NVT QC has been recognized and is an approved training provider through Exemplar Global, USA, for Quality Management Systems, Six Sigma courses and Quality courses. NVT QC is recognized by IAQG and approved through PROBITAS Authentication to deliver AQMS (AS 9100D, AS 9110C & AS 9120B) Internal Auditor & Lead Auditor Courses.

The NVT QC's journey started with the aerospace industry in 1994. The grounding in quality and excellence built in the early days has seen NVT QC rise into prominence as one of the most trusted names in quality in the aerospace, defence and export-oriented industry sectors. NVT QC has conducted audits and offered training programs worldwide (USA, Europe, Africa, Middle East, South East Asia and India). NVT QC has certified more than 1000 clients across India, the Middle East and South East Asia for accreditations like AS 9100, AS 9110, AS 9120, and other Quality Management System standards. Some of the clients that NVT has certified are:

Over its illustrious journey spanning more than 27 years, NVT QC has made significant strides in certifying diverse organizations that span technology, space, aerospace, defence and research labs:

Technology:	**Space, Airforce and Aerospace:**
- L&T Technology Services – All sites, including India, USA - Tata Technologies – All sites including India, Germany, UK and France. - Axiscades Technologies – All Sites - Capgemini Technology - AKTPL (AKKA), India - Umlaut, India (Part of Accenture) - Ka Shin Technologies, Singapore - Detroit Engineering Products (DEP), USA - Etihad Airways Engineering, UAE - Ethiopian Airlines Wire Harness, Ethiopia - Ethiopian Sky Techno, Ethiopia - Aerotech Industries, Philippines	- Indian Space and Research Organization (ISRO), Bangalore - Indian Airforce Base Repair Depots at Chandigarh, Sulur, Kanpur and Nasik - Hindustan Aeronautics Ltd. (HAL's) divisions of: o Aerospace o Overhaul o Helicopter o ARDC o Helicopter MRO o LCA Tejas, o Engine, Aircraft, Foundry & Forge at Bangalore o Aircraft Manufacturing, Aircraft Overhaul at Nasik o Engine Division at Koraput o Avionics Division at Hyderabad - Bharat Dynamic's different divisions in Hyderabad.
Defence:	**Research Labs:**
- Ordnance factories at o Medak o Ambajhari o Khamaria o Kanpur o Muradnagar o Itrasi o Ishapore o Ambernath o Dum Dum o Bhandara o Pune o Hazaratpur. - Naval Aircraft Yard, Kochi	- Defence Research and Development organizations: o Aerial Delivery Research and Development Establishment (ADRDE), Agra o Aeronautical Development Establishment (ADE), Bangalore o Electronics and Radar Development Establishment (LRDE), Bangalore -

NVT QC's vast global reach and experience in certifications and offering training programs will be beneficial in nurturing skilled professionals in the field of defence technology, catering to India's strategic needs. Its comprehensive understanding of Aerospace, Space, Defence, and Quality Management Systems can provide invaluable support to students and researchers, shaping them into skilled professionals capable of meeting the challenges of the modern world.

2. KG AND S Quality Educational Trust, KG AND S School Trust

The second vertical of NVT Group is focussed on K12 education under KG AND S Quality Educational Trust (KG AND S-QET). NVT Group founded the KG AND S Quality Educational Trust (KG AND S-QET), which has emerged as a beacon of educational excellence in Bangalore, India. KG AND S is dedicated to shaping the future of young minds through its three prestigious institutions, **National Public School Whitefield**, **National Public School East and National Public School Marathalli**. With a profound commitment to delivering holistic education in a safe and nurturing environment, the group has made significant educational strides, catalysing positive change and holistic student development.

A. National Public School Whitefield

National Public School Whitefield, situated conveniently in the heart of Whitefield, is a co-educational institution affiliated with the Central Board of Secondary Education (CBSE). Sprawling across 4 acres of lush campus, NPS Whitefield boasts state-of-the-art facilities that create an ideal setting for a progressive and holistic learning experience. Dr K. P. Gopalkrishna, Chairman of NPS Group of Institutions, provided visionary guidance for establishing NPS Whitefield, emphasizing an innovative and child-centric approach to education.

The institution's commitment to delivering high-quality holistic education is evident through many diverse programs that encourage students' intellectual, emotional, social, physical, and creative growth. By fostering an environment that nurtures creativity, innovation, and social skills, NPS Whitefield ensures that students are prepared to thrive academically and in the broader context of life.

B. National Public School, East

Spanning across 7 acres and strategically located near Sarjapur Road's ORR and Bellandur intersection, National Public School East is a testament to KGSQET's dedication to providing exceptional education. Much like its counterpart, NPS East follows a co-educational model and upholds the principles of CBSE. Under the guidance of Dr K.P. Gopalkrishna and the management of NPS Whitefield, NPS East has been meticulously designed to offer a dynamic and enriching learning environment. The institution's primary and secondary syllabi are thoughtfully structured to prepare students for future challenges and to help them carve their unique career paths.

National Public School Marathalli is in the process on getting established in a very prominent area of Bangalore. The motto "**Reach Out, Reach High, Reach Beyond**" is an inspirational guide, encouraging students to transcend boundaries, surpass expectations, and explore horizons beyond the conventional.

3. NVT Quality Educational Trust

NVT Quality Educational Trust (NVTQET) is the third vertical of NVT Group, focusing on higher education. NVTQET was established in 2004 with a vision to establish globally recognized institutions that set the benchmark for international-standard higher education in management and technology within India.

The mission of NVT Quality Educational Trust (NVTQET) is:

- Deliver exceptional higher education in management and technology to global standards.
- Commitment to academic rigour, practical knowledge, and holistic student development.
- Cultivate an inclusive, intellectually curious, and research-oriented faculty.
- Provide rigorous curriculum, cutting-edge facilities, and industry-relevant programs.
- Prepare students with discipline, knowledge, skills, and a global perspective for a changing world.
- Empower graduates as ethical leaders, innovators, and responsible contributors.
- Pursue continuous improvement, forefront educational innovation, and transformative experiences.

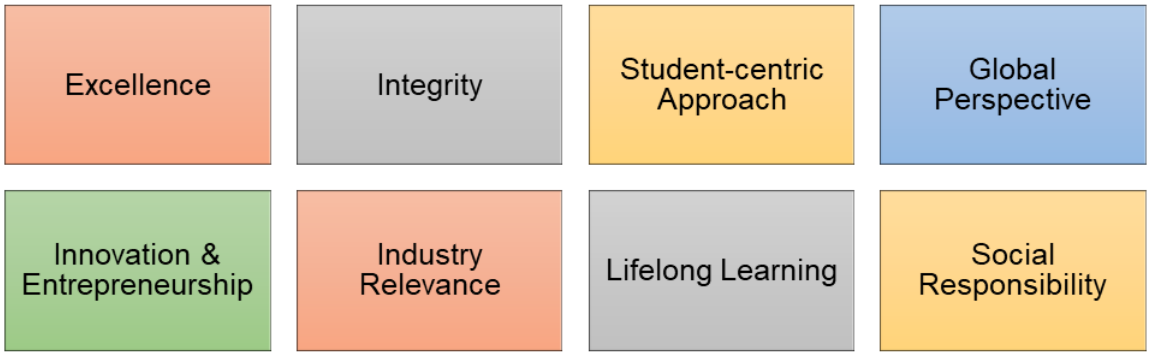


Figure 1: The Values of NVTQET

Since 2006, NVT-QET operates "**International School of Management Excellence**". NVT's close association with the defence and advanced technology industry has led to the realisation of the vast need for a trained workforce in the sector.

A. International School of Management Excellence

In 2006, there was a need to develop managerial talent in the growing technology and industry sectors in India. This led to establishing the International School of Management Excellence (ISME) under NVT Quality Educational Trust. ISME is located in Bangalore and has been dedicated to achieving global standards in education and providing exceptional academic excellence. ISME has been at the forefront of management and technology education over the last 17 years and offers PhD, PG and UG programs in technology and management. Over the years, ISME has been been ranked as one of India's Top 1% of B-Schools.

ISME prides itself on its dynamic and rigorous curriculum, continuously adapting to the changing global business environment. The faculty members at ISME are sourced from top U.S. and Indian schools and industry professionals, ensuring exceptional pedagogical inputs. With a strong emphasis on personalized attention and a liberal learning environment, ISME nurtures its students to become confident, agile, and ethical management graduates. The institution's vision is guided by a well-defined advisory board of directors working towards realising its aspirations. ISME has a world-class infrastructure that provides students with an open and welcoming learning environment. It is a testament to the institution's commitment to excellence in every aspect of education. ISME strives to shape its students into global business managers, equipping them with the skills, knowledge, and values necessary to excel in international business. With a strong focus on academic rigour, quality inputs, and a nurturing atmosphere, ISME stands as a beacon of educational excellence and prepares students for successful careers in the dynamic world of business.

Awards and Recognitions

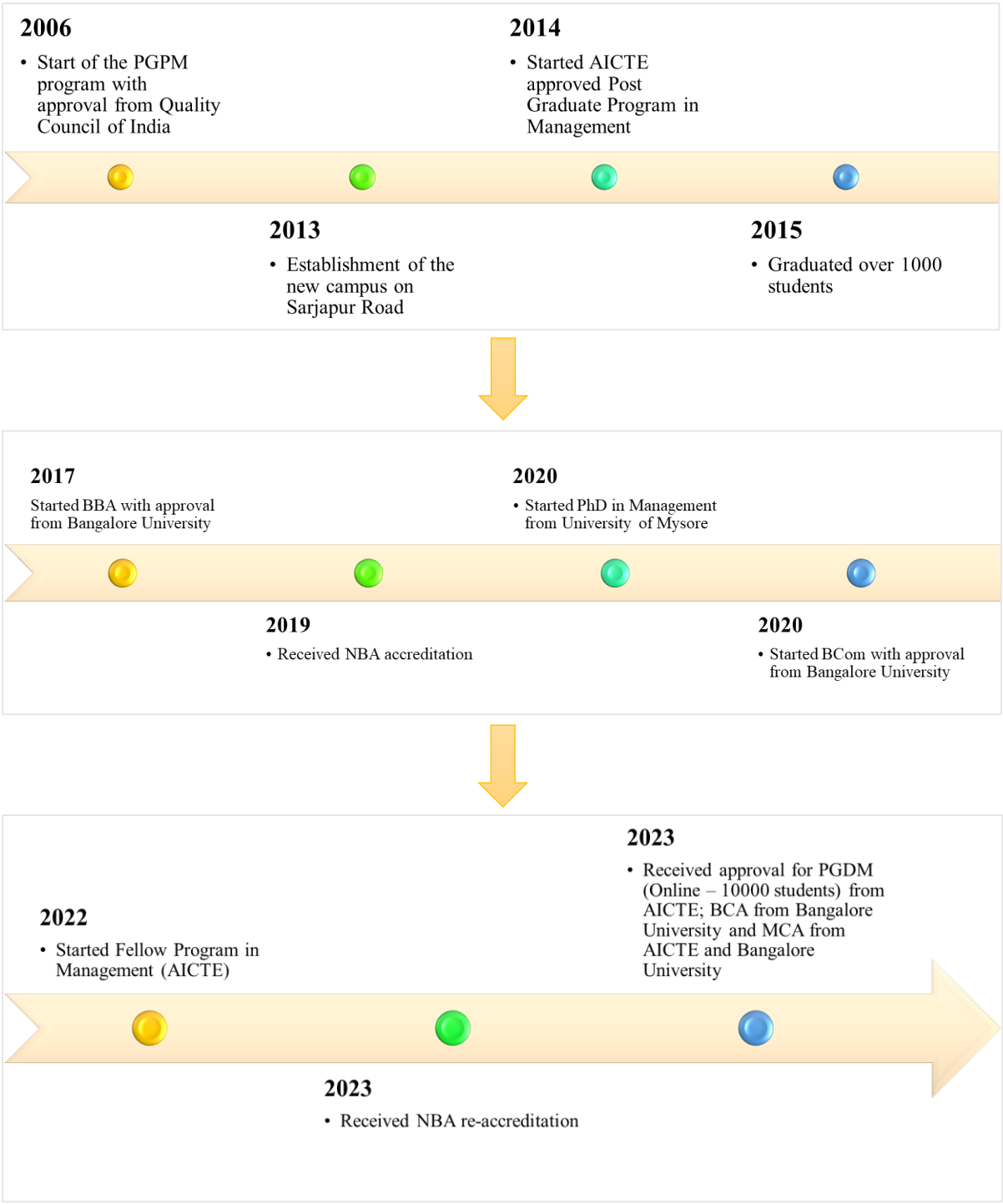
ISME received the Bangalore Management Association's award for Top B School in Bangalore for Academic Excellence 2022. ISME was awarded Management College of the Year by Bangalore Management Association in 2017 by the eminent Padma Vibhushan Dr. D. Veerendra Heggade. In 2014, Brands Academy bestowed the International School of Management Excellence with Fast Emerging Private Management Institute Award. Vishwanathan Anand, an Indian chess grandmaster, gave the awards. The institute has also received the International Achievers Award for Education Excellence from the Indo-Thai Chamber of Commerce, held in Bangkok, Thailand, from Kiran Bedi.

Rankings

- ✧ Ranked 2nd Top B Schools of Super Excellence in India by Competition Success Review (CSR-GHRDC 2022)

- ✧ Top B School for Academic Excellence by Bangalore Management Association - 2022
- ✧ Ranked 34th best B School in India by Times B School Ranking 2021
- ✧ Ranked 3rd top emerging BBA Institute in India by Times BBA Education Ranking 2021
- ✧ Best ROI Management College of the Year | Higher Education Review
- ✧ Ranked 33rd Best B-School in India by Business India, 2017

Milestones – A Journey towards Excellence



Programmes Offered in UG, PG & Research

The International School of Management Excellence (ISME) proudly presents a wide spectrum of programs, ranging from AICTE-approved postgraduate management offerings to specialized online courses and research-oriented doctoral programs. This diverse educational portfolio reflects ISME's commitment to cultivating versatile professionals ready to excel in diverse business domains.

Post Graduate program in Management (AICTE approved) – NBA Accredited
Post Graduate program in Management - Data Science & Analytics (AICTE approved)
Bachelor of Business Administration (Bangalore University)
Bachelor of Commerce (Bangalore University) – ACCA /US CPA
PhD in Management (University of Mysore)
Fellow Program in Management (AICTE Approved)
Online PGDM (Finance) (AICTE) + US CPA
Online PGDM (Retail & Logistics) (AICTE)

MoUs with Industry, International Academia & Professional Bodies

ISME has forged dynamic partnerships through Memoranda of Understanding (MoUs) with many esteemed entities, including international universities, apex academic bodies, and prominent industry associations. These collaborations are a testament to ISME's dedication to fostering global educational excellence and industry relevance.

III. ABOUT THE PROPOSED DEEMED TO BE UNIVERSITY

The sponsoring body, proposes to start a deemed to be university in the name of "**NPS-NVT Institute of Advanced Technological Studies**" at Bangalore, with focus on Defence and Advanced Technologies.

1. Application for Deemed to be University under Distinct Category

We propose establishing "**NPS-NVT Institute of Advanced Technological Studies**" **(NTS)** under the "Distinct University" category defined by the UGC regulations. A Charitable Trust by the name "**NPS-NVT Institute of Advanced Technological Studies**" has been established with this objective. We will be an institution with a unique focus on teaching and research in the field of Defence & Advanced Technology, addressing the country's strategic needs. We aim to contribute to developing highly skilled professionals in the defence industry and provide solutions to strategic technological advancements.

A. Vision, Mission and Values of the Proposed Deemed to be University

The vision of NTS:

"To be a globally acclaimed university of excellence in Defence and Advanced Technology higher education, research, and innovation, contributing to developing innovators and technologists who will serve the needs of the defence & related hi-tech industry."

The mission of NTS:

The mission of the University is to provide an applied research-oriented educational experience in Defence & Advanced Technology through:

- ***Academic excellence*** in the area of advanced technology having applications in national security and related hi-tech industry
- ***Global partnerships*** with government, industry and academia involved in the defence and advanced technology domain
- Develop highly ***skilled technology professionals*** equipped with the knowledge, practical skills, and ethical values to address the country's strategic security and technology needs, contribute to technological advancements, and positively impact society.
-

Values of the University:

We are committed to upholding the highest standards of academic excellence in teaching, research, and student development.

- ✧ We strive for **continuous improvement**, embracing innovative pedagogies and fostering a vibrant intellectual environment that encourages critical thinking and creativity.
- ✧ We foster a **culture of innovation and research**, encouraging faculty and students to engage in cutting-edge research that addresses real-world challenges in Defence and Advanced Technology. Through interdisciplinary collaborations and industry partnerships, we drive innovation and contribute to advancements in the field.
- ✧ Our academic and research endeavours emphasize ethical conduct, integrity, and social responsibility. We instil in our students a sense of **ethical values, professionalism, and a commitment to sustainable development**, ensuring they become responsible global citizens.
- ✧ We maintain strong **industry-academia collaborations** to ensure the relevance of our programs to the evolving needs of the defence and advanced technology sectors. We equip students with industry-relevant skills, practical training, and experiential learning opportunities, enhancing their employability and fostering a seamless transition into professional careers.
- ✧ We promote a **global mindset**, embracing diversity and encouraging cross-cultural understanding. Through international collaborations, exchange programs, and exposure to global best practices, we prepare students to thrive in a multicultural and interconnected world.
- ✧ We prioritize the **holistic development** of our students, providing comprehensive support services, mentorship, and a nurturing environment that fosters personal growth, leadership skills, and teamwork. We promote a healthy work-life balance, student well-being, and co-curricular activities to enhance the student experience.
- ✧ We foster a **collaborative ecosystem** that values teamwork, interdisciplinary collaboration, and knowledge sharing. We actively engage with industry, government agencies, research institutions, and the community, seeking partnerships that drive innovation, address societal challenges, and contribute to national development.
- ✧ We foster a culture of **continuous learning** and encourage faculty and staff to pursue professional development. We promote innovation, adaptability, and resilience, preparing our institution to evolve with emerging trends and challenges.

B. Advisory Body for NTS

An eminent advisory body of higher education, defence, and technology leaders will guide the proposed university.

SN	***Member***	***Designation***
1	K G Garg	Chairman of NVT Group
2	Dr Anand Joshi	Country Policy Advisor, ISDC Global London; Pro-Chancellor, Atmiya University; Ex-Vice Chancellor CMR University; Ex AICTE, IGNOU & NCTE
3	Dr Bhimaraya Metri	Director, IIM Nagpur
4	A.N. Chandramouli	Director, Aerospace & Aviation Sector Skill Council; Ex-President BCIC; Ex-MD Starrag India
5	Dr. B K Das	Distinguished Scientist & Director General - Electronics & Communication Systems (ECS), DRDO
6	Major General George Nariamparambil	Indian Army Veteran & Academician
7	Dr K.P. Gopalkrishna	Founder & Chairman, National Public Schools
8	R. Madhavan	Ex-Chairman HAL
9	Dr. Manohar Sidana	Ex-Director DRDO
10	Dr Naresh Palta	CEO Maini Group – Aerospace & Aviation; Ex-Corporate, Executive Director at HAL
11	Dr Nitin Garg	Director ISME, Bangalore; Director NVT Group
12	Dr Rony G Kurien	Dean, ISME; Chairman AIMS, Karnataka & Kerela
13	Air Vice Marshal Shankar Mani	Indian Army Veteran, Ex-Dean International Relations of Hi-Tech University
14	Tanuj Garg	Director NVT Group
15	Dr Tessy Thomas	Director General (Aeronautical Systems), DRDO
16	Vivek Garg	Director NVT Group

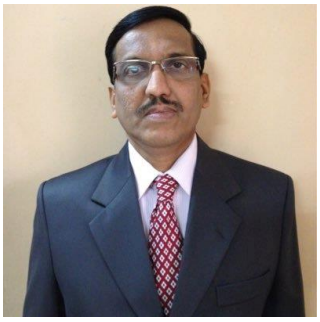
K. G. Garg

Chairman of NVT Group
BE, ME Indian Institute of Technology (Roorkee)

Mr K.G. Garg, the esteemed founder of NVT Group. He holds a Bachelor's and Master's Degree in Metallurgical Engineering from the Indian Institute of Technology (Roorkee), Graduate NDI training from AFTC USA, Lead Assessor ISO 9001 from Neville Clarke UK, ISO 14001 from QMI UK, TL 9000 from Excell, USA and AS 9100 from Plexus Corporation, USA. He has more than four decades of working experience in Quality Management with the Defence Research & Development Organization - Indian Aeronautical Regulatory body, Hindustan Aeronautics Ltd and NVT Group. He has carried out more than 1000 Quality Management System audits and provided training in India and abroad for more than 1000 candidates in quality-related subjects. Mr Garg has been recognized as one of the experts in Quality Management and has been awarded the Quality Guru Award by IMMECA, Mexico.

Dr Anand Joshi

Country Policy Advisor, ISDC Global London; Pro-Chancellor
Atmiya University; Former-Vice Chancellor CMR University;
Ex AICTE, IGNOU & NCTE



Dr. Anand Joshi served in Indira Gandhi National Open University (IGNOU), National Council for Teachers Education (NCTE) and All India Council for Technical Education (AICTE). He also served as Founder Pro Chancellor, Atmiya University, Rajkot and Founder Vice Chancellor, CMR University, Bangalore. He was Dean, Welingkar B-School in Bangalore and was Advisor to Azim Premji Foundation. Currently Dr. Joshi is Country Policy Advisor to International Skill Development Corporation, a London based multi-national Learning & Development Organization. He is also Editor, Indian Education Review published from London. He is also Advisor-Education to JSW Steels, He is member of Statutory Boards/Advisory committees/selection boards of more than 15 Organizations including Govt. of India depts., and Nationalized Banks. Dr Joshi has to his credit Case Study publications in 'Harvard Business Publishing' and 'Richard Ivey School of Publishing'. His articles frequently appear in the 'Times of India' (Education Times). Several of his articles have been published in the "Speaking Tree" of Times of India and the 'Times Higher Book 2014'.

Dr Bhimaraya Metri

Director, IIM Nagpur

Dr. Bhimaraya Metri is an esteemed academic leader and administrator, renowned for his career in management education. Formerly the Director of IIM Tiruchirappalli, he elevated the institute's status among India's top business schools. Dr. Metri specializes in Project Management, Infrastructure, Quality Management, and Supply Chain Management, with a prolific record of research papers and books. He holds key roles in prestigious organizations, including the Indian National Commission for Cooperation with UNESCO, chairing bodies like the All India Board of Management Studies and the Management and Systems Division Council at the Bureau of Indian Standards. He is involved in multiple educational institutions, mentoring leaders, and enhancing technical education quality in India. Dr. Metri actively engages in executive education and promotes international education initiatives. His illustrious career has earned him accolades like the AIMA-Kewal Nohria Award for Academic Leadership. With a Ph.D. from IIT Bombay, he currently serves as President of ISDSI-Global and is a member of the Institute of Supply Management (ISM) USA.

A.N. Chandramouli

Director, Aerospace & Aviation Sector Skill Council;
Former-President BCIC; Former-MD Starrag India;
ME NIT Trichy; PGDM, IIMC

A.N. Chandramouli, a visionary leader with diverse industry contributions, has been pivotal in forming the AASSC (Aerospace & Aviation Sector Skill Council). His strategic approach led to industry collaboration, endorsed by NSDC. As MD of Starrag India, he established cutting-edge manufacturing facilities and introduced localized WMW brand machining centers. With extensive experience in varied sectors like Machine Tools, Electrical, and Consumer Durables, he set up vocational training centers, emphasizing skill development. He has also contributed to the industry and society through his positions as Chairman of QCFI- Quality Circle Forum of India- Karnataka, President of BCIC-Bangalore Chamber of Commerce & Industry, Member of Manufacturing Committee in CII, Executive Committee Member of IMTMA, and championing “Ease of Doing Business” in the Global Investor Meetings of the Govt of Karnataka. Chandramouli is a Graduate in Mechanical Engineering from NIT Trichy and Post Graduate in Management from IIMC (Indian Institute of Management, Calcutta).

Dr. B K Das

Director General - Electronics & Communication Systems, DRDO
MTech, PhD IIT Kharagpur

Dr. B K Das, the Director General (Electronics & Communication System) at DRDO, boasts a distinguished career. From 2015 to 2020, he served as the Director of ITR and later as Director at IRDE, with an interim role at DEAL. Over 33 years, he made significant contributions to the Indian Missile Program, revolutionizing test and evaluation processes for cutting-edge missile systems. Dr. Das's leadership led to the development of innovative systems, including EOTS, Radar Systems, Long Range Telemetry System, Phased Array & Drone-based Telemetry System, and Telecommand System. At IRDE, he oversaw the realization of 21 state-of-the-art products. Dr. Das holds a B.Tech. from Burla Engineering College, Odisha, and M.Tech & Ph.D. from IIT Kharagpur, where he received the Best Graduate Gold Medal and was the institute topper. His remarkable contributions have earned him accolades like the Lakshmipat Singhania-IIM National Leadership Award (2008), the National Award by NRDC (1997-98), and many more. With over 50 publications in international journals, Dr. B K Das continues to shape defense technology and innovation.

Major General George Nariamparambil

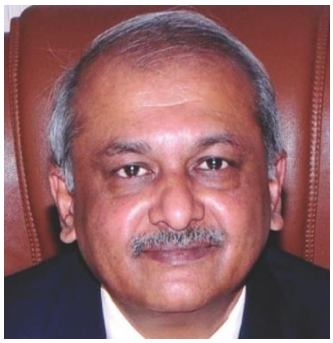
Indian Army Veteran & Academician

Major General George Nariamparambil (Retired) boasts a remarkable career spanning 37 years, from the Indian Army to academia and the corporate world. In the military, he served as an Infantry Officer, excelling in teaching, training, and mentoring at prestigious institutions like the Infantry School in Mhow, National Defence Academy in Khadakvasla, Pune, and the Corps of Military Police Centre and School in Bangalore. He also chaired Army Schools in Bhuj, Gujarat, and Sainik School in Punglwa, Nagaland. His mediation skills earned recognition during his role as Chairman of the Ceasefire Monitoring Group in Nagaland from 2012 to 2013. Post-military service, he held key positions, including Administrative Head at Galaxy School Wadi, Rajkot; Assistant Professor, Dean of Administration, and Student Affairs at XIME, Bangalore; and Director of Vanguard Business School. He further enriched his career by serving as the Vice President at Maini Materials and Movement. Major General Nariamparambil holds a Master's Degree in Defence Studies from Madras University and has successfully completed the Higher Command Course at the Army War College in Mhow, along with various other military training programs.

Dr K. P. Gopalkrishna

Founder & Chairman, National Public Schools

With a legacy spanning five decades, Dr. K. P. Gopalakrishna is a stalwart in education, celebrated for his forward thinking and unwavering commitment to academic rigor. His mentorship has elevated CMRNPS's standards and propelled The International School Bangalore (TISB) to global acclaim among the top international schools. Thousands of National Public Schools alumni owe their success to his holistic approach, which blends tradition with innovation. Dr. Gopalakrishna's leadership embodies the essence of visionary education, leaving an indelible impact on institutions, students, and the pursuit of excellence.



R. Madhavan

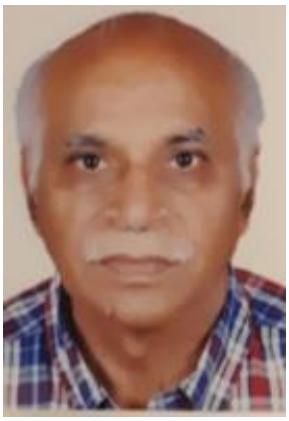
Former-Chairman HAL

BE, NIT Raipur; MTech IIT Madras

R. Madhavan was the Chairman and Managing Director of Hindustan Aeronautics Limited (HAL). He is a Mechanical Engineering graduate from NIT, Raipur and holds a post-graduate degree in M. Tech from IIT Madras. He joined HAL as a Management Trainee (Technical) in July 1982 and was associated with HAL for over 36 years. He was promoted to Executive Director Accessories Division, Lucknow (ADL) in July 2017. During his tenure, ADL was also awarded the best performing Division (Customer Services) award in a company-wide competition in January 2016. He spearheaded the successful absorption of technology for producing Su-30 Airframe & Engine accessories from the raw material phase at HAL Accessories Division, Lucknow. He had also extensively contributed to GOI's "Make in India" strategy by developing MSME sector vendors for Aerospace Manufacturing. With 36 years of experience, Madhavan's passion for aerospace, strategic vision, and technical acumen has propelled HAL's success in defence and aerospace, contributing to India's technological advancements.

Dr. Manohar Sidana

Former Outstanding Scientist &Director Aerial Delivery R&D Establishment, DRDO



After graduating in Aeronautical Engineering from Punjab University in 1969, Dr Manohar joined Propulsion Division of Space Science & Technology Center (Vikram Sarabhai Space Center) Trivandrum. Dr Manohar joined DRDO in 1972 and worked in Research, Development and Certification of Engines, Helicopters, Aircraft, Missiles and Aircraft Systems at various centre's of Military Airworthiness. He played a significant role in creating Center for Military Airworthiness (CEMILAC) at Bangalore in 1996 where he was the Group Director (Systems) and Helicopters. Dr Manohar moved to Air Delivery R&D Establishment Agra in 1997 as Director where he had the opportunity to lead the teams in the area of research development and productionising of various types and configuration of Parachutes. The experience at DRDO included significant collaboration with IISc, IITs, Indian Ordinance Factories, HAL and Private Industry. After retirement from DRDO he prepared a Detailed Project Report on Stratospheric Airship for Department of Science & Technology Govt of India.

Dr Naresh Palta

CEO Maini Group – Aerospace & Aviation; Ex- Corporate Executive Director at HAL;

Dr Naresh Palta acquired his Bachelor's in Aeronautical Engineering from Punjab Engineering College and joined Hindustan Aeronautics Limited (HAL) as a Management Trainee in December 1969. He is also an alumnus of the Air Force Technical College, Bangalore. He later acquired a post-graduate Diploma in Management in 1987. He did PhD in Management at Jain University, Bangalore, in December 2019. Dr Palta had worked in senior leadership roles at different units of HAL and was the General Manager Hyderabad and Korwa Divisions for Avionics and Corporate Executive Director. From Dec 2008 onwards, Dr Palta has been with the Bengaluru-based Maini Group as the CEO of Maini Precision Products Ltd., and from 2013 as Group CEO – Aerospace and Aviation. He is actively involved with many Professional and Industry bodies and is currently the Chairman Empowered Committee for Aerospace & Defence Policies (SIATI); Chairperson of CII Karnataka Aerospace & Defence Panel; Founding Member, Advisory Board, International School of Management Excellence, Bangalore and Director, Karnataka Aerospace Technology Center (KATC).

Dr Nitin Garg

Director ISME, Bangalore; Director NVT Group;BTech & MTech IIT (Bombay); MBA, Carnegie Mellon University; PhD IIML

Dr Nitin Garg holds a PhD from IIM Lucknow, a Master's in Business Administration from Carnegie Mellon University USA, and Bachelor's and Master's degrees in Mechanical Engineering from IIT Bombay. Since 2006, he has been the Director and one of the founding members of ISME, one of the leading business schools in Bangalore. Nitin was conferred the 'International Achievers Award for Academic Excellence' by Indian Achievers Forum for making ISME achieve excellence in management education. He has been the co-Chairman of the Industry Institute Interface committee of BCIC and the AIMS Karnataka and Kerela Chapter Chairman. Before ISME, Nitin worked in technology and management consulting and was a senior member of Deloitte Consulting, USA. Nitin is a serial entrepreneur and has subsequently been part of the founding team of NVT Quality Lifestyle, the real estate vertical of NVT Group; Get100Marks, an EdTech platform; National Public School, Whitefield & East a leading school in Bangalore, besides other ventures.

Dr Rony G Kurien

Dean, ISME; Chairman AIMS, Karnataka & Kerela

Dr Rony Kurien is currently Dean at ISME, Bangalore. He holds a bachelor's Degree in Chemistry from Fergusson College, Pune, and a Master's in Business Administration (Marketing) from Symbiosis Institute of Business Management, Pune, India and a PhD from Anna University, Chennai. Dr Rony Kurien has over three decades of experience and has held senior positions in Education, Business Development, Training & Consulting organizations. He was the Director of Xavier Institute of Management and Entrepreneurship, Bangalore and Dean at Ecole Hoteliere Lavasa, Pune. He was also the Regional Manager- South Asia, Ranlin Corporation, Sydney and Manager of Karnataka and Kerala for the Australian Trade Commission. He is the Chairman of the Association of Indian Management Schools (AIMS) - Karnataka and Kerala Chapter and has been Joint Secretary of the National HRD Network Bangalore. Dr Kurien has presented papers at research conferences and made presentations at international forums in Singapore, Beijing and Mexico, among others.

Air Vice Marshal Shankar Mani

Indian Airforce Veteran,
Former Dean International Relations of Hi-Tech University

Air Vice Marshal Shankar Mani, a seasoned fighter pilot and accomplished executive, boasts a 39-year career. He has commanded various fighter squadrons and airbases, including MiG 21, SU-30 MK I, and MiG 25. Air Vice Marshal Mani also played a role in the IAF 9 Aircraft Formation Aerobatic Team - "THUNDERBOLTS." His extensive flight hours of over 3800 encompass expertise in high-altitude, desert, and maritime air operations. He received two Presidential Awards and commendations from the Chief of Air Staff in recognition of his exceptional service. Air Vice Marshal Mani served as the Director of Light Combat Aircraft Induction and Air Force Project Management Team Leader at the Aeronautical Development Agency in Bangalore. He is an alumnus of several prestigious institutions, including the Defence Services Staff College Wellington, College of Defence Management Secunderabad, and National Defence College in New Delhi. With an M.Sc in Defence Studies and M.Phil in Strategic Studies from Madras University, he also served as a Senior Directing Staff at the National Defence College. Following his superannuation, he made significant contributions as the Dean of International Relations in a leading Hi-Tech University.

Tanuj Garg

Director NVT Group;
MS CMU; MBA, Wharton Business School, USA

Mr Tanuj Garg holds a Masters of Business Administration from The Wharton School, University of Pennsylvania, a Master of Science, Electrical and Computer Engineering from Carnegie Mellon University and a Bachelor of Technology, Telecommunication Engineering. Tanuj was a Fellows candidate at The Wharton School and a University medallist during his Engineering program. Tanuj has several years of experience in the US markets at Citigroup as Director, Head of US MBS and Real-Estate ABS Strategy and Bank of America. Tanuj has worked on several deals with the M&A team for valuing the mortgage portfolio of target companies. He has authored strategy articles expressing views on the direction of the US mortgage market. His publications have been quoted in the US Monetary Policy Conference, Bloomberg, and the Wall Street Journal. Mr Tanuj Garg is the director of NVT Group. He is the founding director of NVT Quality Lifestyle Projects, a leading high-end real estate company; National Public School, Whitefield and National Public School, East; top schools in Bangalore.

Dr Tessy Thomas

Director General (Aeronautical Systems), DRDO

Dr. Tessy Thomas, is a Distinguished Scientist and Director General (Aeronautical Systems) at DRDO. She has a B.Tech in Electrical Engineering from Calicut University, ME in Guided Missiles from the Institute of Armament Technology, Pune, and a PhD in Missile Guidance from Jawaharlal Nehru Technological University, Hyderabad. Joining IAT as a faculty member in 1986 and DRDL in 1988, she played an instrumental role in the Agni Programme, designing guidance schemes for long-range missile systems and underwater weapons. Dr. Thomas's remarkable contributions span over 34 years, encompassing Guidance, Control, Inertial Navigation, Trajectory Simulation, and Mission Design. She led AGNI-4 as Project Director, developing advanced avionics and composite rocket motor casing, and played a pivotal role in AGNI-5's high-impact accuracy. As Director General, she currently leads Aeronautical Systems Cluster Laboratories, overseeing the design and development of cutting-edge UAVs, aircraft, gas turbine engines, surveillance systems, and more for the Armed forces. She's a Fellow of numerous prestigious societies and has received numerous awards, including the DRDO Technology Leadership Award (2019), Lokmanya Tilak National Award (2022), and DRDO Agni Award for Excellence in Self-Reliance (2001).

Vivek Garg

Director NVT Group;

MBA Purdue University; BE NIT Allahabad; PhD ISB (Pursing)

Mr Vivek Garg holds a Master of Business Administration from Krannert Graduate School of Management, Purdue University, USA and a Bachelor's in Electronics Engineering from the National Institute of Technology, Allahabad. He was the recipient of the Deans List award for his overall performance at Purdue University and invited by the faculty at Purdue to be a life time member of Beta Gamma Sigma. He is currently pursuing his PhD from the Indian School of Business. Vivek has worked in companies like GE Medical and Watsco, USA and was the Regional Director for Minrad Inc., responsible for starting the pharmaceutical company's operations in Asia, the Middle East and Africa market. Vivek has widely travelled worldwide and successfully launched products in more than 20 countries. Mr Vivek Garg is the Director of NVT Group. He is the founding director of NVT Quality Lifestyle Projects, a leading high-end real estate company; National Public School, Whitefield and National Public School, East; top schools in Bangalore.

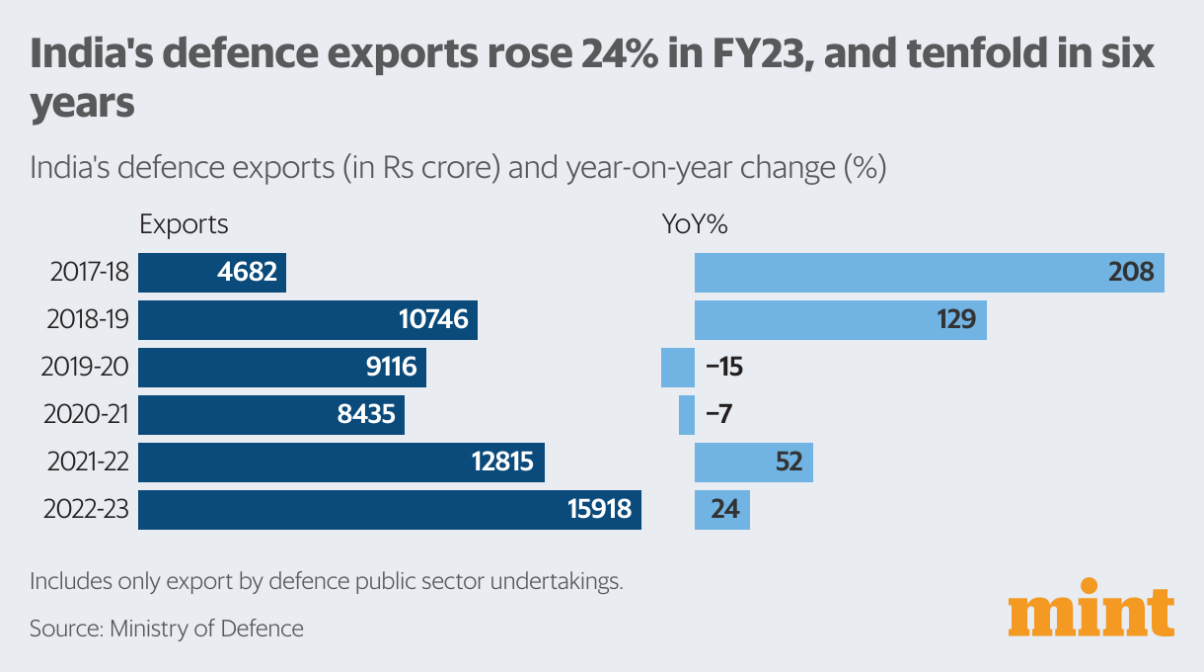
2. Thrust Area of the Proposed Deemed to be University

A. Need for Distinct Category University for Defence

The following set of reports explores a multi-dimensional perspective on the emerging need for a dedicated university in the field of defence technology:

(1) India's focus on Self-reliance

The **Atmanirbhar Bharat Abhiyaan**, or self-reliant India campaign, launched in May 2020, aims to make India self-reliant in all aspects, including defence. Under this movement, the Indian government envisions transforming the nation's defence sector by promoting indigenous R&D and production and reducing reliance on imports. The Union Budget 2022-23 further emphasizes Aatmanirbharta in defence, with a significant portion of the defence budget allocated to the domestic defence industry and ambitious targets set for defence exports. India's defence exports have risen over tenfold in six years (see figure). As India strives to become a global defence manufacturing, R&D hub and achieve self-reliance, the need for skilled talent in defence-related technology becomes paramount.



The below discussion points highlight the importance of developing the necessary skill sets in the defence sector and the urgency of focused efforts by universities to build a talented workforce to meet India's defence aspirations.

- The Indian government has reserved around 70% of the defence budget for the domestic defence industry.

- Contracts worth Rs. 54,000 crores have been signed for domestic defence procurement.
- India's arms exports surged to Rs. 15,918 crores during FY 2022-23, a 10x increase compared to 2017-18.
- The government aims to achieve an export target of Rs. 36,500 crores by 2025.
- India's imports accounts for 11% of the total arms sales globally, making it one of the largest arms importers in the world. The proposed defence budget in 2023 is 5.94 lakh crore (see figure).

Proposed budget allocation to Indian Ministry of Defence (MoD) as a % of GDP and total central government expenditure

Year	Proposed Defence Budget (INR tr)	Total Central Government Expenditure (INR tr)	Proposed Defence Budget as % of GDP	Proposed Defence Budget as % of Total Central Government Expenditure
2023	5.94	45.0	1.93	13.2
2022	5.25	39.4	1.92	13.3
2021	4.78	34.8	2.02	13.7
2020	4.71	30.4	2.38	15.5
2019	4.31	27.9	2.15	15.5
2018	4.04	24.4	2.14	16.6
2017	3.60	21.5	2.11	16.8
2016	3.41	19.8	2.21	17.2
2015	3.10	17.8	2.25	17.4
2014	2.85	17.9	2.29	15.9
2013	2.53	16.7	2.26	15.2

Source: IISS Military Balance+ database; Government of India Union Budgets 2013–2023

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(2) Skill Set Demand in Defence-Related Technology

Given the challenges faced by the ***defence offset policy*** introduced in 2005, there is a compelling need for defence technology skill development in India. A specialized Defence Technology University can address this need by focusing on research, innovation, and skill development. This would promote technology transfer and indigenous development of cutting-edge defence systems. Such a university can contribute significantly to India's self-reliance and technological advancement in the defence sector, aligning with the vision of Aatmanirbhar Bharat Abhiyaan. By nurturing a talent pool of skilled defence technologists, ***India can reduce reliance on foreign vendors for defence technology and equipment.***

India's journey towards Aatmanirbharta in defence is gaining momentum, and the nation's self-reliance aspirations depend significantly on the development of skilled talent in defence-related technology. Universities play a crucial role in building a talented workforce that can meet the challenges of the defence industry and contribute to India's growth as a defence-sourcing hub. **The need of the hour is for focused efforts in skill development and research in the defence sector to ensure India's security, economic growth, and strategic independence**. As the government strives to make India a global defence manufacturing hub, the collaboration between universities, industry, and regulatory agencies will pave the way for a self-reliant and prosperous future for the Indian defence sector. This focus will help India in multiple areas:

- ***Strategic Independence -*** Developing skill sets in defence-related technology will enhance India's strategic independence by reducing its reliance on imports and promoting indigenous defence and aerospace industries.
- ***Boost to the Private Sector -*** Skill development in defence technology will encourage the participation of the private sector, leading to strategic partnerships with foreign producers and the generation of numerous opportunities for Indian companies in defence production.
- ***Economic Growth -*** Enhancing skill sets in defence-related technology will enable India to achieve its goal of expanding the economy to US$ 5 trillion by 2025, as the defence sector plays a vital role in contributing to the country's economic growth.
- ***Self-Reliance in Defence Manufacturing -*** Building talent pools in defence technology is essential to achieve self-reliance in producing defence equipment, a critical component of Aatmanirbharta.
- ***Export Potential -*** Skill development will empower the Indian defence sector to boost exports, achieving the target of Rs. 36,500 crores by 2025, as envisioned under the Aatmanirbhar Bharat mission.

(3) Strategic Need

India is a rapidly developing nation; here are a few reasons why defence-related advanced technology education is crucial for the country:

- ***National Security and Defence Preparedness***

  India's defence sector ensures security and sovereignty. Amidst geopolitical challenges and technology demands, skilled professionals in defence technology are essential. Specialized

programs can nurture talent for advanced artificial intelligence enabled systems, avionics, and space tech, cyber security and other critical areas thereby enhancing defence readiness.

- ***Technological Advancements and Indigenous Development***

  India must emphasize defence engineering, avionics, and chip manufacturing to achieve self-reliance in defence technology. Specialized education in these fields will facilitate the indigenous development of advanced systems, Unmanned arial vehicles (UAVs), and electronics, reducing import dependence, enhancing technological prowess, and fostering innovation in strategic sectors.

- ***Economic Growth and Job Creation***

  Specialized programs in Defence & Advanced Technology can leverage the defence sector's economic growth and job creation potential. The workforce will attract investments, foster high-tech ventures, encourage technology transfer, and generate job opportunities in the manufacturing and research sectors.

- ***Space Exploration and Satellite Technology***

  India's space achievements, led by ISRO, can be enhanced by strengthening defence technology education. This will aid space exploration, satellite technology, and global collaborations. Tailored programs in satellite design, launch vehicles, remote sensing, and communication can position India as a space technology leader.

- ***Strategic Collaborations and Diplomatic Relations***

  Education in defence technology can fortify India's global ties. Collaborations, exchanges, and joint efforts can connect with nations proficient in defence technology. This encourages knowledge exchange, cultural understanding, and international cooperation in key sectors.

India's strategic partnerships with the United States and Russia have resulted in significant agreements and mechanisms to foster cooperation across various domains. These collaborations encompass diverse sectors, from defence and security to trade, technology, and diplomacy. These agreements strengthen the bilateral relationship between the two countries and contribute to regional stability, economic growth, and technological advancement.

India's Major agreements and mechanisms signed with the USA are:

- 2009 - Counter Terrorism Cooperation Initiatives

- 2012 - Defence Technology and Trade Initiatives
- 2015 - Framework for the India-US Defence Relationship
- 2015 - Joint Strategic Vision for the Asia-Pacific and Indian Ocean Region
- 2016 - Logistics Exchange Memorandum of Agreement
- 2016 - Framework for the India-US Cyber Relationship
- 2018 - Communications Compatibility and Security Agreement
- 2019 - Industrial Security Annex
- 2020 - The Basic Exchange and Cooperation Agreement

The recent India-Russia defence deals include these:

- Production of T-90 tanks and Su-30-MKI aircraft
- Supply of MiG-29-K aircraft and Kamov-31 and Mi-17 helicopters
- Upgrade of MiG-29 aircraft
- Supply of multi-barrel rocket launcher Smerch

Defence collaboration has become a pivotal instrument in achieving crucial foreign policy objectives. In recent years, the Indian government has implemented transformative measures to bolster the defence industry ecosystem, fostering domestic dynamism in designing, developing, and manufacturing defence equipment. The capital allocation for the defence services sector has seen an impressive 76% rise over the past nine years. Moreover, the domestic industry's budget dedicated to capital procurement has surged to 68% in 2021-22, surpassing the earmarked 64%. The Defence Production and Export Promotion Policy 2020, unveiled by the Ministry of Defence, aspires to achieve a turnover of Rs. 1,75,000 crore (US$ 144.0 billion) by 2025, with a focus on exporting Rs. 35,000 crore (US$ 4.3 billion) worth of aerospace and defence goods and services. To attract investment, the government has significantly increased the maximum Foreign Direct Investment (FDI) allowed under the automatic route from 74% to 100%. Prime Minister Narendra Modi's vision of 'development and pro-people reforms' has set the stage for a promising future for India's defence industry.

(4) Defence Sector PSUs in India

The defence sector is crucial for a nation's security and sovereignty. Central Public Sector Undertakings (CPSUs) under the Ministry of Defence support India's defence industry, which plays a pivotal role in technological advancement and self-reliance. Notable PSUs include:

- ***Hindustan Aeronautics Limited (HAL)***: A leader in aircraft design, development, and manufacturing, HAL's expertise positions it as a key player in India's defence growth. With projects like LCA Tejas, HAL's global aviation prominence is rising.
- ***Bharat Electronics Limited (BEL):*** BEL excels in defence electronics, supplying radars, communication systems, and more. Its focus on self-reliance aligns with India's modernization goals.
- ***Bharat Dynamics Limited (BDL):*** BDL specializes in missiles and strategic equipment, poised for growth in line with the rising demand for modern defence systems.
- ***BEML Limited (BEML):*** BEML's diverse portfolio includes defence, rail, power, mining, and infrastructure sectors. Its contributions to armoured vehicles and earth-moving equipment are noteworthy.

These DPSUs are vital for India's defence growth. Their expansion depends on skilled talent in aerospace engineering, electronics, and advanced materials. As India emphasizes indigenous development, these skillsets are paramount. Collaborations between government, academia, and industry are crucial, fostering research, innovation, and skill development. Investing in skilled talent will bolster DPSUs, enhance self-reliance, and establish India as a global defence player. Specialized education in Defence Technology can further India's strategic needs, security, and technological advancements. Establishing a focused university in this domain will cultivate skilled professionals, contributing to India's progress and self-sufficiency.

(5) Bangalore's Pivotal Role in Defence & Advanced Technology

Bangalore, also known as the Silicon Valley of India, has emerged as a leading hub for defence, aerospace, advanced technology, and IT services with a strong focus on national security. The city's strategic location, robust infrastructure, skilled workforce, and presence of key institutions like ISRO, DRDO, HAL, and Tata Institute of Science have contributed to its prominence in these sectors.

Bangalore's Defence and Aerospace Ecosystem

- ***ISRO (Indian Space Research Organisation)***: ISRO, headquartered in Bangalore, is India's premier space research organization. Its contributions to satellite technology, space missions, and space research have placed India on the global map of space exploration and enhanced national security through advanced communication and remote sensing capabilities.

- ***DRDO (Defence Research and Development Organisation)***: Bangalore hosts numerous DRDO laboratories, including the Aeronautical Development Establishment (ADE) and the Defence Avionics Research Establishment (DARE). These labs focus on research and development in areas like aeronautics, avionics, and advanced materials, contributing significantly to the country's defence capabilities.

- ***HAL (Hindustan Aeronautics Limited)***: As one of Asia's largest aerospace and defence manufacturers, HAL plays a critical role in aircraft and helicopter production, repair, and overhaul. It has been instrumental in supplying aircraft to the Indian Air Force and the Indian Navy, strengthening India's defence preparedness.

- ***Indian Institute of Science:*** Bangalore is home to the prestigious Indian Institute of Science (IISc). The institute is at the forefront of scientific research and have contributed to the development of advanced technologies for national security.
- ***IT Services for National Security:*** Bangalore houses several **cybersecurity firms** and research labs, working to safeguard critical infrastructure, government networks, and sensitive information against cyber threats. The city is a major data analytics and

intelligence services centre, providing crucial support in gathering, analyzing, and interpreting data for national security and defence agencies.

Future Proposed Projects in Bangalore

- ***IT Research Labs***: Bangalore is set to witness the establishment of state-of-the-art IT research labs focused on artificial intelligence, quantum computing, and autonomous systems. These labs will enhance India's capabilities in areas vital for national security and technological advancement.
- ***Machining and Advanced Manufacturing***: Bangalore plans to set up advanced machining facilities to strengthen the indigenous defence manufacturing sector that can produce complex components for aerospace and defence applications.
- ***Electric Vehicles (EVs)***: With a growing focus on sustainable transportation, the city aims to become a center for EV development, manufacturing, and R&D, which can have significant applications in defence and security operations.
- ***Drone (Unmanned Arial Vehicles) Industry***: Bangalore is eyeing exponential growth in the drone industry, which is crucial for surveillance, reconnaissance, and security-related operations. The city aims to support startups and research institutions in this domain.

Bangalore's robust defence, aerospace, advanced technology, and IT services ecosystem has made it a crucial contributor to India's national security efforts. The city's existing institutions like ISRO, DRDO, HAL, and Tata Institute of Science, along with future proposed projects in IT research labs, machining, electric vehicles, and the drone industry, are set to elevate Bangalore's position as a vital player in India's defence and security landscape. Continued investments and collaborations in these domains will undoubtedly strengthen India's capabilities to safeguard its national interests and achieve technological excellence.

B. Alignment with UGC Vision and National Education Policy

The objectives of the proposed University align closely with the objective and mandate of the University Grants Commission (UGC) to achieve excellence in Higher Education Institutions (HEIs) in teaching and research by coordination, determination, and maintenance of standards of university education in India.

The proposed defence technology university aligns with UGC's vision as it addresses several of the thrust areas outlined in the **New Education Policy**:

✧ ***Multidisciplinary and Holistic Education***

The defence technology university will offer a multidisciplinary approach to education, combining fields such as defence engineering, aerospace engineering, electronics and communication, computer science and artificial intelligence, data science, technology management, infrastructure & sustainable engineering and public policy. This holistic approach will equip students with comprehensive knowledge and skills, fostering well-rounded professionals in the defence sector.

✧ **Digital Empowerment and Online Education**

The defence technology university shall embrace digital technologies and online education to enhance learning experiences. By leveraging digital platforms, the university will offer innovative courses, reach a broader audience, and provide flexible learning options to students, promoting digital empowerment in defence technology.

✧ **Skill Development and Employability**

A key focus of the defence technology university will be to develop highly relevant skills to the defence industry. By offering programs with specialisations in Marine & Naval Engineering; Combat Vehicles; Electric Vehicles; System Engineering; Ship Building; Combat Vehicles; Robotics & IoT; Missile Engineering; Weapon Engineering; Nuclear Engineering; Structures and Design; Aerodynamics Engineering; Aerospace Propulsion;

Guided Missiles; Air Armaments and UAVs; VLSI and Embedded systems; Avionics; RF and Microwave Engineering; Digital Signal Processing; Control Systems; Power Electronics; Radar and Communication; Defence Electronics Systems; Quantum Computing; Digital Forensics; Cyber Security; Machine Learning & Artificial Intelligence; Networking; Block Chain; Data Mining; Data Analytics; Modelling & Simulation among others, the university will enhance the employability of its graduates, addressing the need for skilled professionals in the defence sector.

- **Research, Innovation, and Entrepreneurship**

  The defence technology university will promote research and innovation in defence technology. Through research projects and collaborations with industry and Defence Research & Development Organisation (DRDO) labs, the university will contribute to technological advancements in the defence sector and encourage entrepreneurship among students and faculty.

- **Capacity Building of Teachers for Quality Education**

  The defence technology university will prioritize the capacity building of its faculty members. By providing training and professional development opportunities, the university can ensure that its teachers deliver high-quality education in defence technology.

- **Governance and Autonomy**

  As a specialized university, the defence technology university will have greater autonomy to design and implement its curriculum, research agenda, and administrative policies. This autonomy will facilitate efficient governance and decision-making processes.

- **Accreditation and Excellence**

  The defence technology university will strive for excellence and accreditation in its academic programs. The university will enhance its reputation by meeting the highest quality standards and attracting students and researchers from across the country and abroad.

- **Equitable and Inclusive Education**

  The defence technology university will promote equitable and inclusive education by providing opportunities to students from diverse backgrounds. The university can implement policies and initiatives to ensure access to education for all, irrespective of social or economic status.

- **Promotion of Indian Knowledge Systems**

  The defence technology university will incorporate Indian knowledge systems and indigenous practices relevant to defence technology.

✧ **Internationalization of Education**

The defence technology university will explore international collaborations, student exchanges, and joint research programs to foster internationalization. Such initiatives will facilitate cross-cultural learning and exposure to global best practices in defence technology.

The Four Quadrant Approach of the Proposed University

The proposed university will aim to contribute to UGC's vision with a FOUR quadrant approach:

Academic Excellence

Distinct Programs

Research & Innovation

Global Environment

✧ ***Academic Excellence*** – NTS is committed to upholding the highest standards of academic excellence. By offering specialized Defence and Advanced Technology programs, we aim to provide students with a comprehensive education that equips them with the necessary knowledge, skills, and competencies to excel in their chosen fields. Our rigorous curriculum, designed in consultation with industry experts and academic scholars, ensures that students receive a contemporary, industry-relevant, and globally competitive education.

✧ ***Distinct Programs*** - The specialized programs in Defence and Advanced Technology at NTS are designed to meet the industry's emerging needs and address the country's strategic requirements. Our programs provide a multidisciplinary approach, integrating theoretical knowledge with practical training and experiential learning opportunities. Our curriculum fosters critical thinking, problem-solving, and innovation, preparing students to navigate the complexities of a rapidly changing global environment.

✧ ***Research and Innovation*** – NTS strongly emphasises research and innovation. We believe cutting-edge research and innovation are vital to academic excellence and meeting the challenges of a global environment. Our faculty and students will engage in research activities focused on advancing research in the areas of Marine & Naval Engineering;

Combat Vehicles; Electric Vehicles; System Engineering; Ship Building; Combat Vehicles; Robotics & IoT; Missile Engineering; Weapon Engineering; Nuclear Engineering; Structures and Design; Aerodynamics Engineering; Aerospace Propulsion; Guided Missiles; Air Armaments and UAVs; VLSI and Embedded systems; Avionics; RF and Microwave Engineering; Digital Signal Processing; Control Systems; Power Electronics; Radar and Communication; Defence Electronics Systems; Quantum Computing; Digital Forensics; Cyber Security; Machine Learning & Artificial Intelligence; Networking; Block Chain; Data Mining; Data Analytics; Modelling & Simulation among others. By promoting research collaborations with industries, research organizations, and international institutions, we will contribute to the body of knowledge in Aerospace & Defence Technology and foster innovations that have practical applications.

- ***Global Environment*** – NTS recognizes the importance of preparing students to thrive in a global environment. Through collaborations with international institutions, participation in student exchange programs, and exposure to diverse cultures and perspectives, we will offer students a truly global experience. Our curriculum will incorporate global best practices, enabling students to develop a global mindset, cross-cultural competence, and adaptability to work in diverse settings.

C. Objectives of the Proposed Deemed to be University

Aligning with the vision to be a globally recognized university of excellence in Defence and Advanced Technology higher education, research, and innovation, the specific objectives of the University are:

1. **To excel in higher education by focusing on defence and advanced technologies** like Defence Engineering, Aerospace Engineering, Avionics, Defence Communication Technologies, Cyber Security, Artificial Intelligence, Data Science, Technology Management, Infrastructure & Sustainable Engineering, Public Policy and more, and meet the nation's strategic needs.
2. **To pioneer interdisciplinary and multidisciplinary teaching and research**.
3. **To achieve national and global recognition** for high-quality teaching and research in Defence Technology and related fields.
4. To nurture the **unique capabilities of each student** in Defence Technology and foster their **holistic development**.

5. To **establish product and technology development centers**, prioritizing research and innovation in Defence Technology.
6. To create **centers of excellence** for cutting-edge research in Defence Technology, fostering **industry-academic partnerships**.
7. To offer an **innovative and flexible curriculum, incorporating credit-based courses** and industry engagement projects.
8. **To provide modern infrastructure** and **technology** to students with hands-on experience and exposure to state-of-the-art defence technologies.
9. To contribute to **social transformation through responsive teaching, research, and fieldwork** aligned with the provisions of NEP, 2020.

3. Fifteen Years Strategic Vision Plan

A. Academic Plan

This section presents the University's broad-visioned strategic plan for the next 15 years to achieve the above-mentioned objectives. We detail the plan under three heads: (1) Innovative Programs & Curriculum, (2) Innovative Teaching & Learning Approach, and (3) Outcome-based Evaluation Processes.

(1) Innovative Programs & Curriculum

The University will have a robust curriculum with specific educational objectives across all allied fields related to Defence Technology. The curriculum will be designed by leading industry professionals in defence and technology in line with NEP and UGC guidelines to ensure a dynamic, industry-relevant, applied and focussed on product development, innovation and industry immersion. The plan is to achieve the below *specific goals* in 15 years of the University's operations:

a. ***There are at least five multi-disciplinary departments with graduate, post-graduate and doctoral-level programs in the first five years of the university.***
b. ***New programs will be introduced every year in alignment with industry requirements.***
c. ***At least 35% of the programs offered in each department are above Post-graduate/Masters Level.***
d. ***At least one doctoral program offered in each of the department***
e. ***The program's educational objectives, program design & syllabus are not older than two years***
f. ***The Academic Council is a dynamic mix of subject matter experts, industry representatives & stakeholder agents and is actively engaged in program designing and innovation***

(2) Innovative Teaching & Learning Approach

The University will employ a highly structured pedagogy to execute the teaching & learning process. The pedagogical tools will be constantly upgraded by engaging with experts from international universities, industry practitioners and educational consultants. The plan is to achieve the below *specific goals* in 15 years of the University's operations:

a. ***The pedagogy employed in various programs of the University is focused on enhancing the learning experience of every single student of the University***

b. ***The teaching-learning process of the University encourages cross-disciplinary research and develops a holistic thinking***
c. ***The student of the University is exposed to varied learning experiences from collaborated foreign universities & domestic expert institutions.***
d. ***The pedagogy allows the student to choose their pathway to excellence flexibly.***

(3) Outcome-based Evaluation Processes

The University will adopt an outcome-based examination and evaluation process, wherein the outcomes at the course, program, and University levels are pre-defined in measurable outcomes as possible. A continuous improvement process will be implemented for the annual outcomes analysis. The plan is to achieve the below *specific goals* in 15 years of the University's operations:

a. ***The Vision and Mission for each department are well-defined in tandem with the University's vision.***
b. ***The Program Educational Objectives (PEOs) for each program within a department are clearly defined.***
c. ***The Program Outcomes (POs) for each program within a department are clearly defined.***
d. ***The Course Learning Outcomes (CLOs) for each of the courses within a program are clearly defined.***
e. ***A systematic process of measuring & analysing the achievement of CLOs, and thereby the POs, through which the PEOs.***

B. Research Plan

The university will be steadfast in its pursuit of excellence in research due to its profound impact on society, the nation, and the global community. By aiming to achieve the highest standards in research, the University shall strive to address complex challenges, discover breakthrough technologies, and generate knowledge that can drive transformative change. The excellence in research enhances the university's reputation and attracts brilliant minds, top-tier faculty, and collaborative partnerships from around the world. Through rigorous academic programs, state-of-the-art facilities, and a supportive research ecosystem, we empower our scholars to push boundaries, explore new frontiers, and contribute significantly to their respective fields. The specific objectives of the University in this regard to be achieved in the next 15 years can be summated as below:

a. ***Cultivate and strengthen cross-disciplinary and cross-campus research programs***
b. ***Establish cutting-edge research laboratories and centers of excellence***
c. ***Enhance high-impact research through government and industry sponsorships***
d. ***Strengthen technical, legal, and financial support for Intellectual Property Rights (IPRs)***

C. Student Admissions Plans

At NTS, we take immense pride in our focused approach towards student admissions, driven by our commitment to maintaining exceptional quality and diversity. Aligned with our vision, we strive to create an intellectually stimulating and inclusive learning environment where students can thrive and contribute to advanced technology and defence advancements. With a target of gradually increasing our student population over the years, we aim to admit a diverse mix of students, including domestic and international scholars. By providing scholarships to economically and socially challenged students and recognizing meritorious achievements, we ensure equal opportunities for deserving individuals to pursue their educational aspirations. Our comprehensive selection process, which combines standardized tests and demonstrable aptitude for technology and product development, enables us to identify and admit students who possess academic excellence and the passion and potential to excel in our research-focused institution. Through this dedicated approach, we strive to nurture a community of talented individuals who will contribute to groundbreaking research and emerge as future leaders in advanced technology and defence. The specific objectives of the University in this regard to be achieved in the next 15 years is:

a. ***Achieve targeted student enrolment.***
b. ***Promote international student diversity.***
c. ***Provide scholarships to deserving students***
d. ***Implement a comprehensive student selection process***

D. Faculty Plan

At the University, we firmly believe in the transformative power of quality faculty. We recognize that exceptional faculty members drive academic excellence, research innovation, and student success. With a steadfast commitment to fostering a world-class learning environment, we prioritize recruiting and retaining outstanding faculty who

embody excellence, diversity, and international standards. By attracting renowned scholars and experts in advanced technology and defence, we create a dynamic intellectual community where knowledge is cultivated, ideas are nurtured, and boundaries are pushed. Our unwavering belief in quality faculty is evident in our emphasis on competitive remuneration, continuous professional development, and opportunities for faculty to engage in cutting-edge research, product development, and industry collaborations. Investing in our faculty's expertise empowers them to inspire the next generation of leaders, drive groundbreaking research, and contribute to advancing knowledge and the nation's defence capabilities. The specific objectives of the University in this regard to be achieved in the next 15 years are:

a. ***Ensure faculty growth and development***
b. ***Foster international faculty engagement***
c. ***Recruit outstanding and diverse faculty***
d. ***Promote continuous faculty development***
e. ***Focus on faculty retention***
f. ***Engage faculty in product development and applied research/consultancy***

E. Infrastructure Plan

The University recognizes the paramount importance of infrastructure in achieving its overarching vision. With a wealth of expertise derived from our sponsoring body's exceptional track record in developing cutting-edge infrastructural facilities, we have set forth a series of objectives to create an environment that fosters advanced learning, research excellence, and comprehensive student development. These objectives encompass expanding the campus area, establishing state-of-the-art academic blocks, laboratories, and hostels, providing excellent sports facilities, and implementing smart classrooms equipped with the latest technologies. By prioritizing infrastructure, we aim to provide our students and faculty with the ideal ecosystem for academic growth, innovation, and realising their full potential in advanced technology and defence. The specific objectives of the University in this regard to be achieved in the next 15 years are given below:

a. ***Expand the area from 5 acres to a 20+ acre acres within the next five years.***

b. ***Develop state-of-the-art academic blocks and laboratories, totalling 2,25,000 square feet, within the next five years, and further expand to 10,00,000 square feet within the next 15 years.***
c. ***Enhance hostel facilities to 1,50,000 square feet within the next five years and expand to 5,00,000 square feet within 15 years.***
d. ***Establish state-of-the-art laboratories on campus to cater to all Engineering and Advanced Technology domains.***
e. ***Provide comprehensive sports facilities to facilitate the holistic development of students.***
f. ***Equip classrooms with the latest teaching and learning technologies, creating smart classrooms for an enhanced educational experience.***

F. Campus Information and Communications Technology Plan

The significance of ICT in achieving our university's vision cannot be overstated. ICT catalyzes innovation, collaboration, and knowledge dissemination in today's digital era. It empowers us to embrace online learning, engage in remote research collaborations, and connect with global networks. With the expertise of our sponsoring body, renowned for its proficiency in developing advanced infrastructures, we are well-equipped to harness the potential of ICT in creating an environment conducive to advanced technology and defence education. By leveraging ICT, we aim to transform the educational experience, facilitate efficient operations, and enable seamless connectivity within our university community and beyond. We recognize the significance of ICT in enabling seamless operations, fostering effective communication, and empowering stakeholders with access to relevant information. We are committed to realizing the following ICT-related objectives:

a. ***Establish an effective online system for admissions, academics, and placements, facilitating seamless and efficient processes for students, faculty, and other stakeholders.***
b. ***Develop and implement an information management system that enables easy access to relevant information for all stakeholders.***

G. Governance and Administration Plan

The proposed university's governance plan will be designed per the guidelines given by the University Grants Commission (UGC).

Governing Bodies of the University
• **Executive Council** • **Academic Council** • **Board of Studies** • **Finance Committee** • **Selection Committee**

(1) Executive Council:

The proposed university's highest governing body will be the Executive Council, which will be headed by the Vice-Chancellor and consist of not less than ten and not more than thirteen members. As the principal executive body, the Executive Council will make crucial decisions about the institution's management and policies. The Council's composition will include the Vice-Chancellor as the Chairperson, a Pro-Vice-Chancellor (wherever applicable), and two members selected from among the Deans of schools of studies appointed by the Vice-Chancellor. Additionally, one Professor and one Associate Professor will be nominated and appointed by the Vice-Chancellor on a rotational basis. The Executive Council will also include nominees from the sponsoring body and a representative nominated by the respective Government or the Commission, depending on the university's funding sources. The Registrar will be ex-officio Secretary of the Executive Council, ensuring effective communication and coordination within the body.

The Executive Council will be the final decision-making authority for all matters concerning the university, including academic, administrative, personnel, financial, and developmental aspects. In addition to its general authority, the Executive Council will have specific powers subject to the UGC regulations and the university's rules. These powers encompass appointing Professors, Associate Professors, Assistant Professors, and other academic staff based on recommendations from the Selection Committee. The Council will also oversee the maintenance of discipline among university employees per established rules. Moreover, it will have the authority to appoint Visiting Professors, Emeritus Professors, Professor of Practice, Consultants, Scholars, and others as required and

determine their terms and conditions of appointment. The Executive Council will perform any other duties and exercise additional powers as prescribed by the university's rules and regulations. It will also be responsible for formulating and implementing rules and regulations for the institution. In cases where the university is controlled or funded significantly by the Central or State Government, the creation of posts will require the Executive Council's approval, subject to prior sanction from the respective Government providing grants. This arrangement ensures that the Executive Council remains the central authority in guiding the university's growth and progress while adhering to the guidelines set by the UGC.

(2) Academic Council

The proposed university's principal academic body will be the Academic Council, tasked with coordinating and exercising general supervision over the institution's academic policy. Led by the Vice-Chancellor as the Chairperson, the Academic Council will play a pivotal role in maintaining academic standards and promoting excellence in teaching and research. The Council's composition will include a Pro-Vice-Chancellor (wherever applicable), Deans of faculties from various schools, and heads of departments or centers. Additionally, the Vice-Chancellor will nominate Professors, Associate Professors, and Assistant Professors on a rotational basis to ensure diverse representation from different disciplines. The Academic Council will also co-opt external experts renowned for their specialized knowledge. As the ex-officio Secretary of the Academic Council, the Registrar will facilitate efficient functioning and communication within the Council.

The Academic Council of the proposed university will play a pivotal role in overseeing the institution's academic policies and ensuring the maintenance of high academic standards. Subject to the UGC regulations and the university's rules, the Academic Council will be vested with significant powers, including general supervision over academic policies and instructional methods. It will provide directions on the coordination of teaching across departments, faculties, schools, and centers, as well as evaluate research and enhance academic standards. The council will actively promote inter-departmental and inter-faculty collaboration, establishing committees or boards to facilitate this cooperation.

Additionally, the Academic Council will address matters of academic interest through its own initiatives or in response to references from departments, faculties, schools, centers, or the Executive Council. It will prescribe courses and programs of study leading to degrees

and diplomas while also ensuring the proper conduct of examinations in compliance with university rules. The council will maintain rigorous examination standards and determine the equivalence of diplomas and degrees from other institutions. The Academic Council will institute fellowships, scholarships, medals, and prizes to recognize academic excellence and motivate students. It will frame rules governing various academic functions, including admissions, examinations, fellowships, studentships, concessions, discipline, and residence. Regular review of departmental activities will be undertaken to uphold and improve instructional standards. The council will recommend the creation of teaching posts such as Professors, Associate Professors, and Assistant Professors to the Executive Council. It will also propose the establishment or abolition of departments, centers, schools, and faculties. As part of its duties, the Academic Council will make further recommendations to the Executive Council as required.

The council will exercise any other powers and perform additional duties prescribed by the university's rules. With its authority over academic matters, the Academic Council will contribute significantly to shaping the institution's educational landscape, fostering a dynamic learning environment, and ensuring academic excellence.

(3) Board of Studies

For each department or school within the university, there will be a Board of Studies, responsible for approving research subjects for various degrees and recommending measures to enhance teaching and research standards. The Board of Studies will be chaired by the Dean of the school or the Head of the department, with all Professors from the respective school or department being part of it. Additionally, two Associate Professors and two Assistant Professors will be included through rotational appointments. Two external experts with specialized knowledge will be co-opted to enrich the Board's discussions and decisions. The Board of Studies will closely collaborate with the Academic Council, ensuring that academic policies align with the university's vision and goals.

(4) Finance Committee

The Finance Committee will play a crucial role in overseeing the financial aspects of the proposed university. Led by the Vice-Chancellor as the Chairperson, the Committee will include a Pro-Vice-Chancellor (wherever applicable) and representatives nominated by the Executive Council, Chancellor, and sponsoring body. Additionally, the Committee will feature a representative from the Central Government, if applicable, or the Commission

in the case of other institutions. The Finance Officer will serve as the ex-officio Secretary of the Finance Committee. This body will regularly examine the university's accounts, scrutinize expenditure proposals, and recommend financial limits for recurring and non-recurring expenses based on the university's resources and income. The Finance Committee's recommendations will be crucial in ensuring the university's financial stability and growth.

(5) Selection Committee for Appointment of Teaching Staff

The Selection Committee for the appointment of teaching staff will be responsible for recommending candidates for various academic positions, including Professors, Associate Professors, Assistant Professors, and other relevant posts. In line with the University Grants Commission (UGC) regulations, the committee's constitution will align with the guidelines for minimum qualifications for academic staff. The committee will be constituted separately, and its recommendations will be made to the Executive Council. By adhering to fair and transparent selection procedures, this committee will ensure that the university recruits highly qualified and capable faculty members who contribute to the institution's academic excellence and research endeavours.

Other Objectives Related to Governance and Administration

The University is committed to achieving excellence in education and research, and as part of our strategic vision plan, we have outlined a comprehensive approach to Governance and Administration. This plan serves as a roadmap for the next 15 years, guiding our efforts in fostering strong relationships with the government, industry, and society, obtaining accreditations and rankings that reflect our commitment to quality, providing robust student support and progression programs, engaging with our esteemed alumni network, and embracing internationalization to create a diverse and globally connected academic community. By aligning our actions with these strategic objectives, we aim to strengthen our university's governance and administration, ensuring that our institution remains at the forefront of technological and defence education, significantly impacting society and preparing our students for successful futures. The specific objectives are designed under five headings – (1) Engagement with Government, Industry and Society (2) Accreditations and Ranking (3) Student Support and Development (4) Engagement with Alumni (5) Internationalisation.

(1) Engagement with Government, Industry and Society

In today's interconnected and rapidly evolving world, the importance of universities engaging with government, industry, and society cannot be overstated. At NTS, we recognize that fostering strong relationships with these key stakeholders is essential for fulfilling our mission of providing a transformative education that prepares students for success in the technological and defence sectors. By actively engaging with government institutions, industries, and the broader society, we contribute to advancing knowledge and innovation and ensure that our educational programs remain relevant, responsive, and aligned with the evolving needs of the world around us. Through collaborative partnerships, knowledge exchange, and mutually beneficial initiatives, our university will significantly impact society, address socio-economic challenges, enhance employability, and drive technological advancements that positively influence local and global communities. In this context, we outline a comprehensive framework for our engagement with government, industry, and society, encompassing multiple objectives aimed at maximizing our collective potential and creating a thriving ecosystem of academic, industrial, and societal collaboration, as below:

a. ***Actively collaborate with local industries by providing technological and managerial solutions to enhance consultancy activities.***
b. ***Identify socio-economic problems and offer technical assistance to address them effectively.***
c. ***Deepening the engagement with both the government and industry to enable meaningful academic outcomes, through collaborative research projects, internships, and joint initiatives.***
d. ***Foster product and technology development activities among students and faculty by facilitating engagement with government and industry partners.***
e. ***Prioritize the development of student's skills and knowledge to enhance their employability with a focus on defence and advanced technology domains.***

(2) Accreditations and Ranking

The University recognizes the significance of accreditations and rankings in affirming our commitment to excellence. In an increasingly competitive educational landscape, these external validations are crucial indicators of our academic prowess, research capabilities, and overall institutional quality. By striving for outstanding accreditations and securing

notable rankings, we bolster our reputation and attract exceptional faculty, students, and industry partnerships. These achievements are a testament to our unwavering dedication to providing a transformative learning experience, advancing knowledge through innovative research, and fostering an environment that nurtures our community's intellectual and professional growth. In this section, we outline key objectives related to accreditations and rankings, setting ambitious targets to propel NTS to the forefront of academic distinction, both nationally and globally:

a. ***Over the next five years, our goal is to secure a minimum grading of A+ from the National Assessment and Accreditation Council (NAAC) and a minimum score of 675 from the National Board of Accreditation (NBA).***
b. ***Within the next five years, we aim to secure a rank within the coveted top 100 in the National Institutional Ranking Framework (NIRF).***
c. ***Actively pursue international accreditation and validate our commitment to meeting globally recognized quality standards.***
d. ***Over the next ten years, we aspire to participate in renowned international rankings and secure a position within the top 500 universities globally.***

(3) Placements and Student Development

At NTS, we are deeply committed to the holistic development and support of our students. We recognize that providing exceptional educational experiences extends beyond the confines of the classroom. Our strategic vision plan emphasizes the importance of placements and student support as we strive to create an enriching environment that nurtures their intellectual, personal, and professional growth. Through comprehensive programs and initiatives, we aim to empower our students with the necessary tools, resources, and opportunities to excel academically, explore their passions, develop crucial life skills, and prepare for successful careers in the technological and defence sectors. By prioritizing student well-being, academic support, career development, and leadership cultivation, we foster a vibrant and inclusive campus community where every student can thrive and achieve their full potential. Below are our specific objectives related to Student Support and Development, which we aim to achieve in the first 15 years of operations:

a. ***Provide comprehensive academic support services that cater to the diverse needs of our students.***

b. ***Preparing students for successful careers in the technological and defence sectors.***
c. ***Holistic student well-being in achieving academic success and personal growth.***
d. ***Nurturing well-rounded individuals with leadership potential.***
e. ***Strengthening Defence Recruitment Readiness***
f. ***Facilitating Private Sector Placements***
g. ***Nurturing Entrepreneurial Ventures***

(4) Engagement with Alumni

Our relationship with our alums is invaluable and integral to the success and reputation of our institution. We recognize that our alums form a distinguished community of accomplished professionals who have made significant contributions in the technological and defence sectors. Our strategic vision plan strongly emphasises fostering meaningful and lasting engagement with our alumni, as we believe in the power of their experiences, expertise, and networks to enrich the educational journey of our current students and contribute to our university's continuous growth and development. By establishing a robust alumni network, providing ongoing educational and professional development opportunities, facilitating mentorship and career guidance, and encouraging alumni involvement and contributions, we aim to cultivate a strong bond between the university and its graduates. Through these efforts, we strive to create a mutually beneficial relationship that nurtures lifelong connections, fosters a sense of pride and belonging, and enhances the collective achievements and impact of our alums and the university. The specific objectives in this regard are listed below:

a. ***Create a vibrant and interconnected alumni network.***
b. ***Supporting the ongoing education and professional development of our alums.***
c. ***Facilitating Mentorship and Career Guidance in supporting the professional growth of our alums.***
d. ***Encourage our alums to contribute to our university's growth and success actively.***

(5) Internationalisation

In an increasingly interconnected and interdependent world, internationalization has become vital to higher education. At NTS, we recognize the importance of preparing our students for global opportunities and challenges. Our strategic vision plan strongly emphasises internationalization, aiming to create a globally engaged and culturally diverse academic community. By embracing international collaborations, enhancing global student mobility, attracting and nurturing global talent, and infusing global perspectives into our curriculum, we seek to cultivate an environment that fosters intercultural understanding, promotes cross-border collaborations, and prepares our students to thrive in a globalized society. Through these internationalization objectives, we aim to equip our students with the skills, knowledge, and global perspectives necessary to become effective global citizens, ready to contribute positively to a rapidly changing world:

a. ***Promoting international exchanges and collaborations to foster a diverse and globally connected academic community.***
b. ***Providing students with international exposure and intercultural competencies.***
c. ***Attract talented students and faculty from around the world, creating a vibrant and inclusive academic community.***
d. ***Infuse global perspectives and cross-cultural understanding into our curriculum, ensuring that our students are equipped with a deep appreciation for diversity and a nuanced understanding of global issues.***

H. Financial Plan

Financial management forms a critical pillar of NTS's strategic vision plan, as we recognize the significance of sound financial practices in supporting our mission of delivering exceptional education and research opportunities. Our commitment to financial sustainability, revenue generation, and responsible resource allocation underscores our dedication to ensuring long-term viability and growth. By strengthening financial controls and governance, optimizing resource allocation, and establishing financial reserves and contingency plans, we aim to secure the university's financial integrity and resilience. These financial management objectives enable us to make strategic investments, maintain a strong financial foundation, and provide our students and faculty with the necessary resources to excel in their academic pursuits. Through diligent financial management, we can enhance our ability to fulfil our mission,

achieve our strategic goals, and continue making a positive impact in the field of technology and defence education.

a. ***Ensuring Financial Sustainability and maintaining a sound financial foundation to support long-term growth and sustainability.***
b. ***Explore and pursue diverse revenue generation opportunities to support the university's strategic objectives.***
c. ***Maintaining robust financial controls and governance practices.***
d. ***Optimize the allocation of financial resources to support the university's strategic priorities.***
e. ***Build reserves and contingency funds to address unforeseen circumstances, economic downturns, and emergencies.***

4. Five-years Rolling Implementation Plan

The specific objectives discussed above are summarised section-wise in the below table:

A. ACADEMIC PLAN
(1) Innovative Programs & Curriculum
a. There are at least FIVE multi-disciplinary departments with graduate, post-graduate and doctoral level programs. *b. New programs will be introduced every year in alignment with industry requirements* *c. At least 30% of the programs offered in each of the department are above Post-graduate/Masters Level* *d. At least ONE doctoral program offered in each of the department* *e. The program educational objectives, program design & syllabus are not older than TWO years* *f. The Academic Council is a dynamic mix of subject matter experts, industry representatives & stakeholder agents and is actively engaged in program designing and innovation*
(2) Innovative Teaching & Learning Approach
a. The pedagogy employed in various programs of the University are focused on enhancing the learning experience of every single student of the University *b. The teaching-learning process of the University encourages cross-disciplinary research and develops a holistic thinking* *c. The student of the University is exposed to varied learning experiences from collaborated foreign universities & domestic expert institutions* *d. The pedagogy allows the student to flexibly choose his/her pathway to excellence*
(3) Outcome-based Evaluation Processes
a. The Vision and Mission for each of the department are well-defined in tandem with the University's vision *b. The Program Educational Objectives (PEOs) for each program within a department are clearly defined* *c. The Program Outcomes (POs) for each program within a department are clearly defined* *d. The Course Learning Outcomes (CLOs) for each of the course within a program are clearly defined*

e. *A systematic process of measuring & analysing the achievement of CLOs, and thereby the POs, through which the PEOs.*

B. RESEARCH PLAN

a. *Cultivate and strengthen cross-disciplinary and cross-campus research programs*
b. *Establish cutting-edge research laboratories and centers of excellence*
c. *Enhance high-impact research through government and industry sponsorships*
d. *Strengthen technical, legal, and financial support for Intellectual Property Rights (IPRs)*

C. STUDENT ADMISSIONS PLAN

a. *Achieve targeted student enrolment*
b. *Promote international student diversity*
c. *Provide scholarships to deserving students*
d. *Implement a comprehensive student selection process*

D. FACULTY PLAN

a. *Ensure faculty growth and development*
b. *Foster international faculty engagement*
c. *Recruit outstanding and diverse faculty*
d. *Promote continuous faculty development*
e. *Focus on faculty retention*
f. *Engage faculty in product development and applied research/consultancy*

E. INFRASTRUCTURE PLAN

a. *Expand the campus area from the current 5 acres to a 20-acre campus within the next 5 years.*
b. *Develop state-of-the-art academic blocks and laboratories, totalling 2,25,000 square feet, within the next 5 years, and further expand to 10,00,000 square feet within the next 15 years.*
c. *Enhance hostel facilities to 1,50,000 square feet within the next 5 years, and further expand to 6,00,000 square feet within the next 15 years.*
d. *Establish state-of-the-art laboratories on campus to cater to all domains of Engineering and Advanced Technology.*
e. *Provide comprehensive sports facilities to facilitate the holistic development of students.*
f. *Equip classrooms with the latest teaching and learning technologies, creating smart classrooms for an enhanced educational experience.*

F. CAMPUS INFORMATION & COMMUNICATIONS TECHNOLOGY PLAN

a. *Establish an effective online system for admissions, academics, and placements, facilitating seamless and efficient processes for students, faculty, and other stakeholders.*
b. *Develop and implement an information management system that enables easy access to relevant information for all stakeholders*

G. GOVERNANCE AND ADMINISTRATION PLAN

(1) Engagement with Government, Industry and Society

a. *Actively collaborate with local industries by providing technological and managerial solutions to enhance consultancy activities.*
b. *Identify socio-economic problems and offer technical assistance to address them effectively.*
c. *Deepening the engagement with both the government and industry to enable meaningful academic outcomes, through collaborative research projects, internships, and joint initiatives.*
d. *Foster product and technology development activities among students and faculty by facilitating engagement with government and industry partners.*
e. *Prioritize the development of students' skills and knowledge to enhance their employability with a focus on defence and advanced technology domains*

(2) Accreditations and Ranking

a. *Over the next five years, our goal is to secure a minimum grading of A+ from the National Assessment and Accreditation Council (NAAC) and a minimum score of 675 from the National Board of Accreditation (NBA).*
b. *Within the next five years, we aim to secure a rank within the coveted top 200 in the National Institutional Ranking Framework (NIRF).*
c. *Actively pursue international accreditation and validate our commitment to meeting globally recognized quality standards.*
d. *Over the next ten years, we aspire to participate in renowned international rankings and secure a position within the top 500 universities globally.*

(3) Placements and Student Support

a. *Provide comprehensive academic support services that cater to the diverse needs of our students.*
b. *Preparing students for successful careers in the technological and defence sectors.*

c. *Holistic student well-being in achieving academic success and personal growth.*
d. *Nurturing well-rounded individuals with leadership potential.*
e. *Strengthening Defence Recruitment Readiness*
f. *Facilitating Private Sector Placements*
g. *Nurturing Entrepreneurial Ventures*

(4) Engagement with Alumni

a. *Create a vibrant and interconnected alumni network*
b. *Supporting the ongoing education and professional development of our alumni.*
c. *Facilitating Mentorship and Career Guidance in supporting the professional growth of our alumni.*
d. *Encourage our alumni to actively contribute to the growth and success of our university.*

(5) Internationalisation

a. *Promoting international exchanges and collaborations to foster a diverse and globally connected academic community.*
b. *Providing students with international exposure and intercultural competencies.*
c. *Attract talented students and faculty from around the world, creating a vibrant and inclusive academic community.*
d. *Infuse global perspectives and cross-cultural understanding into our curriculum, ensuring that our students are equipped with a deep appreciation for diversity and a nuanced understanding of global issues.*

H. FINANCIAL PLAN

a. *Ensuring Financial Sustainability and maintaining a sound financial foundation to support long-term growth and sustainability.*
b. *Explore and pursue diverse revenue generation opportunities to support the university's strategic objectives.*
c. *Maintaining robust financial controls and governance practices.*
d. *Optimize the allocation of financial resources to support the university's strategic priorities.*
e. *Build reserves and contingency funds to address unforeseen circumstances, economic downturns, and emergencies.*

Five Years Rolling Implementation Plan

In this section we present the actionable plan for each block of FIVE years over the next FIFTEEN years. For each of the *specific objectives* defined in the previous section, here we have defined a specific *Measure of Attainment (Quantifiable Metric)* and estimated timeline of achieving the same is given.

- ***Column-A***: The specific objective under the respective head defined in the previous section
- ***Column-B***: Measure of Attainment (Quantifiable Metric) definition for respective specific objective in Column-A
- ***Column-C to Column-G:*** Targeted Quantity of attainment as defined in Column-B in each of the first five years starting from Academic Year (AY) 2025-26 to Academic Year (AY) 2029-30
- ***Column-H:*** Targeted TOTAL Quantity of attainment as defined in Column-B in the 6^{th} to 10^{th} years starting from Academic Year (AY) 2030-31 to Academic Year (AY) 2034-35
- ***Column-I:*** Targeted TOTAL Quantity of attainment as defined in Column-B in the 6^{th} to 10^{th} years starting from Academic Year (AY) 2035-36 to Academic Year (AY) 2039-40

A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*
A. Academic Plan								
(1) Innovative Programs & Curriculum								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) There are at least FIVE multi-disciplinary departments with graduate, post-graduate and doctoral level courses	Number of New Departments (Schools) classified based on Discipline of Studies **(Goal: A total of 5 departments in 15 years)**	2	5	5	5	5	5	5
(b) New programs will be introduced every year in alignment with industry requirements	Number of New Programs introduced every year **(Goal: A total of 16 programs to be introduced in 15 years)**	4	9	2	1	-	-	-
(c) At least 30% of the programs offered in each of the department are above Post-graduate/Masters Level	Percentage of Post-graduate/Masters Programs offered out of all programs of university **(Goal: A minimum of 30% of all programs)**	50%	50%	50%	50%	50%	50%	50%
(d) At least ONE doctoral program offered in each of the department	Number of Departments with at least one doctoral program offered **(Goal: All departments by 15 years)**	-	1	5	5	5	5	5

(e) The program educational objectives, program design & syllabus are not older than TWO years	Number of Revisions of Curriculum by the Board of Studies **(Goal: Once every 2 years, hence, at least 7 revisions in 15 years)**	-	1	-	1	-	3	2
(f) The Academic Council is a dynamic mix of subject matter experts, industry representatives & stakeholder agents and is actively engaged in program designing and innovation	Number of Meetings of Academic Council per year **(Goal: 1 per year per department, hence, at least 15 meetings in 15 years)**	5	5	5	5	5	5	5
	Percentage of subject matter experts in the Academic Council **(Goal: 30% of the members of academic council)**	30%	30%	30%	30%	30%	30%	30%
	Percentage of industry representatives in the Academic Council **(Goal: 30% of the members of academic council)**	30%	30%	30%	30%	30%	30%	30%
	Percentage of stakeholder agents in the Academic Council **(Goal: 30% of the members of academic council)**	30%	30%	30%	30%	30%	30%	30%

The university is committed to excellence in teaching, research, and fostering innovation to meet the dynamic needs of our nation's security and technological advancements. As we embark on this journey, we have meticulously planned FIVE distinct departments, each offering comprehensive programs tailored to address the unique challenges of modern times.

School of Defence Engineering	School of Computer Science and Mathematics	School of Social Science, Technology & Management	School of Infrastructure & Sustainable Engineering	School of Public Policy

Each department at NTS will be committed to providing undergraduate, post-graduate, and doctoral programs that equip our students with the knowledge and skills needed to excel in their chosen fields. Our dedicated faculty and state-of-the-art facilities will ensure that students receive a world-class education that empowers them to become leaders and pioneers in the defence and technology sectors. Together, we will shape a bright future, securing the nation and driving technological advancements for years to come.

Refer Annexure-A for list of programs under each department

As per the above details list, the University will have the below number of departments and programs:

Departments	***Graduate-level***	***Post-graduate-level***	***Doctoral-level***	***Total***
School of Defence Engineering	3	3	1	6
School of Computer Science & Mathematics	2	1	1	3
School of Technology Management and Social Science	1	1	2	2
School of Infrastructure & Sustainable Engineering	1	1	1	2
School of Public Policy	1	2	1	3
TOTAL	**8**	**8**	**6**	**16**

Characteristics of Academic & Proficiency Programmes

The proposed academic programs offer a diverse array of learning opportunities, including Certificate and Diploma Programs, Undergraduate and Postgraduate options, Research Programs, and innovative pathways like 4-Year and 5-Year Integrated Programs. These Integrated Programs allow both multiple entry and exit points, and an Interdisciplinary Dual Degree (IDDD) Program promotes holistic learning. An Integrated Research Program seamlessly transitions students from Postgraduate studies to Ph.D. pursuits. This multifaceted approach underpins the university's commitment to fostering versatile talents for impactful research and innovation. A list of the types of programmes intended to offer by the proposed University are given below:

- Certificate programs
- Diploma programs
- Under Graduate programs
- Post Graduate Diploma programs
- Post Graduate programs
- Research programs
- 4 Years Integrated programs leading to Basic Degree + PG in specialized field.
- 5 Years Integrated programs leading to Basic Degree + PG in specialized field. (With multiple entry and multiple exit policy)
- Inter Disciplinary Dual Degree(IDDD) programs
- Integrated Research Programme leading to PG in specialized field + Ph.D.

Proposed Programme Structure

The University will adhere to the UGC (Establishment and Operationalization of Academic Bank of Credits) Regulations, 2021, for structuring its programs. This framework will be followed with minor credit variations up to 10% to ensure flexibility and adaptability while maintaining the prescribed standards.

<table>
<tr><th colspan="3">Under-Graduate Programs</th><th colspan="3">Post-Graduate Programs</th></tr>
<tr><th>Year</th><th>Entry</th><th>Exit</th><th>Year</th><th>Entry</th><th>Exit</th></tr>
<tr><td>I Year</td><td>After 12th</td><td>• CERTIFICATE after 1st year
• 2 semesters
• 36 – 40 credits</td><td>I Year</td><td>a) Bachelor’s Degree (Honours / Research)
b) Bachelor Degree / Advanced Diploma
c) Integrated 4 / 5 year</td><td>• PG Diploma
• 36 – 40 credits</td></tr>
<tr><td>II Year</td><td>After I Year</td><td>• DIPLOMA
• 4 Semesters
• 72 – 80 credits (including 36 – 40 Credits)</td><td>II Year</td><td>After 1st Year</td><td>72-80 credits in two years</td></tr>
<tr><td>III Year</td><td>After II year</td><td>• ADVANCED DIPLOMA / DEGREE
• 6 semesters
• 108 – 120 credits</td><td colspan="3" rowspan="2">Note: 1 credit – 1 hour theory or 1 hour Tutorial or 2 hour of lab</td></tr>
<tr><td>IV Year</td><td>After III year
With 108 credits</td><td>• BACHELOR’S DEGREE (Honours / Research)
• 8 semesters
• 144 – 160 Credits</td></tr>
</table>

Qualification Type and Credit Requirements

Levels	Qualification title	Credit requirements
Level 5	Undergraduate Certificate (in the field of learning/discipline)for those who exit after the first year (two semesters) of the undergraduate programme. (Programme duration: first year or two semesters of the undergraduate programme)	36–40
Level 6	Undergraduate Diploma (in the field of learning/discipline)for those who exit after two years (four semesters) of the undergraduate programme (Programme duration: First two years or four semesters of the undergraduate programme)	72–80
Level 7	Bachelor' Degree (Programme duration: Three years or six semesters).	108–120
Level 8	Bachelor' Degree (Honours / Research) (Programme duration: Four years or eight semesters).	144–160
Level 8	Post-Graduate Diploma for those who exit after the successful completion of the first year or two semesters of the two-year Master's degree programme). (Programme duration: One year or two semesters)	36–40
Level 9	Master's Degree (Programme duration: Two years or four semesters after obtaining a Bachelor's degree).	72–80
Level 9	Master's Degree (Programme duration: One year or two semesters after obtaining a four-year Bachelor's Degree(Honours / Research).	36–40
Level 10	Doctoral Degree	Minimum prescribed credits for coursework and a thesis with published work

(2) Innovative Teaching and Learning Approach								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) The pedagogy employed in various programs of the University are focused on enhancing the learning experience of every single student of the University	Percentage of Students Promoted to next Semester/Year at each Program Level **(Goal: 90% of each batch of students)**	90%	90%	90%	90%	90%	90%	90%
(b) The teaching-learning process of the University encourages cross-disciplinary research and develops a holistic thinking	Percentage of courses to be taken across departments **(Goal: 10% of course enrolled by any student)**	10%	10%	10%	10%	10%	10%	10%
(c) The student of the University is exposed to varied learning experiences from collaborated foreign universities & domestic expert institutions	Percentage of Students Participated in at least one of the Student Exchange Programs from foreign or domestic universities **(Goal: At least 10% of all students)**	10%	10%	10%	10%	10%	10%	10%
	Number of foreign students attending student exchange programs of the University	25	25	25	25	25	125	125

	(Goal: At least 5 students per Department in a year)							
(d) The pedagogy allows the student to flexibly choose his/her pathway to excellence	Percentage of Credits that are Electives **(Goal: At least 30% of the total credits of each program)**	30%	30%	30%	30%	30%	30%	30%
(3) Outcome-based Evaluation Processes								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
a) The Vision and Mission for each of the department are well-defined in tandem with the University's vision	Number of New Departments with well-defined Vision and Mission Statements **(Goal: All Departments)**	2	5	5	5	5	5	5
b) The Program Educational Objectives (PEOs) for each program within a department are clearly defined	Number of Programs with clearly defined PEOs **(Goal: All Programs)**	4	13	15	16	16	16	16
c) The Program Outcomes (POs) for each program within a department are clearly defined	Number of Programs with clearly defined POs **(Goal: All Programs)**	4	13	15	16	16	16	16
d) The Course Learning Outcomes (CLOs) for each of	Number of Programs with clearly defined CLOs **(Goal: All Programs)**	4	13	15	16	16	16	16

the course within a program are clearly defined								
e) A systematic process of measuring & analysing the achievement of CLOs, and thereby the POs, through which the PEOs	Number of Annual Measurement of CO-PO Attainment **(Goal: All Programs)**	4	13	15	16	16	16	16

B. Research Plan

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Cultivate and strengthen cross-disciplinary and cross-campus research program	Percentage of doctoral students working on cross-disciplinary and cross-campus research **(Goal: At least 20% of all doctoral students)**	-	20%	20%	20%	20%	25%	30%
(b) Establish cutting-edge research laboratories and centers of excellence	Number of new research laboratories in each department **(Goal: At least 1 per department)**	0	1	5	6	6	6	6
	Number of centers of excellence in each department **(Goal: At least 1 per department)**	0	1	5	6	6	6	6

(c) Enhance high-impact research through government and industry sponsorships	Number of research sponsored projects funded by government agencies **(Goal: At least 15 projects in 15 years)**	0	0	2	2	2	4	5
	Number of research sponsored projects funded by industry bodies **(Goal: At least 15 projects in 15 years)**	0	0	2	2	2	4	5
(d) Strengthen technical, legal, and financial support for Intellectual Property Rights (IPRs)	Number of IPRs registered **(Goal: At least 15 projects in 15 years)**	0	0	2	2	2	4	5

C. Student Admissions Plan

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Achieve targeted student enrolment	Number of **new** students admitted **(Goal: A minimum of total 30000 students admitted in 15 years)**	360	905	1260	1330	1445	13350 (5 years)	15940 (5 years)

(b) Promote international student diversity	Percentage of international students admitted **(Goal: At least 10% of the new admissions, but not more than 15%)**	-	5%	5%	10%	10%	15%	15%
(c) Provide scholarships to deserving students	Percentage of students admitted with economically challenged background under University Scholarship Scheme **(Goal: At least 10% of the new admissions)**	10%	10%	10%	10%	10%	10%	10%
	Percentage of students admitted with socially challenged background under University Scholarship Scheme **(Goal: At least 25% of the new admissions)**	25%	25%	25%	25%	25%	25%	25%
	Percentage of students admitted on meritorious grounds under University Scholarship Scheme **(Goal: At least 10% of the new admissions)**	10%	10%	10%	10%	10%	10%	10%
(d) Implement a comprehensive student selection process	Ratio of final admissions to applications received **(Goal: 1:10, i.e., for every 10 applications received 1 student admitted on an average)**	1:10	1:10	1:10	1:10	1:10	1:10	1:10

D. Faculty Plan								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Ensure faculty growth and development	Number of full-time faculty employed **(Goal: The ratio of student to faculty must be at least 1:20)**	18	64	116	160	196	1723 (5 Years)	2392 (5 Years)
	Number of part-time faculty **(Goal: At least 25% of the size of full time faculty)**	5	16	29	40	49	433 (5 Years)	600 (5 Years)
(b) Foster international faculty engagement	Number of courses handled by International Faculty **(Goal: At least 1 course per program delivered)**	4	14	20	22	22	22 (per year)	22 (per year)
(c) Recruit outstanding and diverse faculty	Percentage of number of faculty with PhD **(Goal: At least 70% of full-time faculty)**	50%	50%	55%	55%	60%	65%	70%
	Percentage of Faculty with at least 5 years of relevant industry experience	50%	50%	50%	50%	50%	50%	50%

	(Goal: At least 50% of full-time faculty)							
	Gender ratio of faculty – Males : Females **(Goal: At least 1:1)**	1:1	1:1	1:1	1:1	1:1	1:1	1:1
	Percentage of faculty from socially challenged background **(Goal: At least 25% of the total number of faculty)**	25%	25%	25%	25%	25%	25%	25%
(d) Promote continuous faculty development	Number of days faculty is engaged in faculty development activity per year **(Goal: At least 10 days per year per full-time faculty)**	10	10	10	10	10	10	10
(e) Focus on faculty retention	Attrition Rate (Ratio of number of faculty left during the period to average number of faculty employed during the period) **(Goal: Not more than 10%)**	10%	10%	10%	10%	10%	10%	10%
(f) Engage faculty in product development and applied research/consultancy	Percentage of faculty engaged in applied research / consultancy	50%	50%	55%	55%	60%	65%	70%

	for at least 20% of the working hours in a year **(Goal: At least 70% of the faculty)**							

Faculty Policy

The university is dedicated to maintaining an optimal student-faculty ratio of 1:20, ensuring personalized attention and quality interactions between faculty members and students. Moreover, in alignment with our commitment to real-world applicability and global perspectives, a substantial 25% of the full-time faculty will be drawn from industry experts and international academia. This integration of part-time faculty members, with their practical insights and diverse backgrounds, will enrich the learning experience and provide students with valuable exposure to industry trends and international academic practices.

Year	***No. of Students in Campus***	***No. of Full Time Faculty Employed***	***No. of Part Time Faculty on Contract***
Year-1	360	18	5
Year-2	1260	64	16
Year-3	2280	116	29
Year-4	3120	160	40
Year-5	3780	196	49
Year-6	4740	247	62
Year-7	5580	291	73
Year-8	6660	347	87
Year-9	7740	401	101

Year-10	8460	437	110
Year-11	9000	464	116
Year-12	9180	473	119
Year-13	9360	482	121
Year-14	9420	485	122
Year-15	9480	488	122

E. Infrastructure Plan

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Expand the campus area from the current 5 acres to a 20-acre campus within the next 2 years.	Total Campus area in acres **(Minimum: 20-acres)**	5 acres	5 acres	5 acres	20 acres	20 acres	30 acres	30 acres
(b) Develop state-of-the-art academic blocks and laboratories, totalling 2,25,000 square feet, within the next 5 years, and further expand to 10,00,000 square feet within the next 15 years.	Constructed area for academic, administration & other buildings **(Goal: At least 75 sqft per student in campus)**	Additional 75000 sqft	Additional 75000 sqft	Additional 75000 sqft	Additional 100,000 sqft	Additional 100,000 sqft	Additional 300,000 sqft	Additional 300,000 sqft
(c) Enhance hostel facilities to 1,50,000 square feet within the next 5 years, and further expand to	Constructed area for hostel buildings in thousand sqft	Additional 30000 sqft	Additional 30000 sqft	Additional 30000 sqft	Additional 30000 sqft	Additional 50000 sqft	Additional 150,000 sqft	Additional 150,000 sqft

5,00,000 square feet within the next 15 years.	**(Goal: At least 150 sqft per student in campus at 50% occupancy)**							
(d) Establish state-of-the-art laboratories on campus to cater to all domains of Engineering and Advanced Technology.	Percentage of departments with fully functional laboratories **(Goal: All departments to have required laboratories)**	100%	100%	100%	100%	100%	100%	100%
(e) Provide comprehensive sports and recreational facilities to facilitate the holistic development of students.	Percentage of the total land area dedicated for sports & recreational facilities **(Goal: At least 20%)**	20%	20%	20%	20%	20%	20%	20%
(f) Equip classrooms with the latest teaching and learning technologies, creating smart classrooms for an enhanced educational experience.	Percentage of classrooms with smart technologies **(Goal: All classrooms)**	100%	100%	100%	100%	100%	100%	100%

The University will be setting up a number of laboratories that will serve as dynamic hubs of experimentation and exploration, fostering a collaborative environment where theoretical concepts are brought to life through real-world applications. Complementing this immersive practical approach, the university will also establish a series of Centers of Excellence at the departmental level. These centers will be hubs of cutting-edge research, driving forward advancements in defence technology, avionics, chip manufacturing, space exploration, and related fields. A list of proposed laboratories and centres of excellences are provided in **Annexure-B.** *Based on the Physical and Academic Infrastructure requirements*

in accordance with AICTE norms, a detailed plan of land requirements & infrastructure plan is presented in **ANNEXURE-C and ANNEXURE-D.**

F. Campus Information & Technology Plan								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Establish an effective online system for admissions, academics, and placements, facilitating seamless and efficient processes for students, faculty, and other stakeholders.	Percentage of use of ICT systems for campus-wide academic and administration processes **(Goal: 100% of the campus)**	100%	100%	100%	100%	100%	100%	100%
(b) Develop and implement an information management system that enables easy access to relevant information for all stakeholders	Percentage of use of MIS for campus-wide data management **(Goal: 100% of the academic, administration & management processes)**	100%	100%	100%	100%	100%	100%	100%

G. Governance And Administration Plan

(1) Engagement with Government, Industry and Society

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Actively collaborate with local industries involved in defence sector by providing technological and managerial solutions to enhance consultancy activities.	Number of local entities collaborated with the University **(Goal: At least 1 entity per masters-level program per year)**	3	5	8	9	9	45 (5 years)	45 (5 years)
(b) Identify socio-economic problems and offer technical assistance to address them effectively.	Number of community responsibility projects successfully completed **(Goal: At least 1 entity per department per year)**	5	5	5	5	5	25 (5 years)	25 (5 years)
(c) Deepening the engagement with both the government and industry to enable meaningful academic outcomes, through collaborative research	Number of sponsored / collaborative research projects completed **(Goal: At least 1 entity per department per year)**	5	5	5	5	5	25 (5 years)	25 (5 years)

projects, internships, and joint initiatives	Percentage of students interning in industry/government organisations / research projects **(Goal: Every student of the univesrity)**	100%	100%	100%	100%	100%	100%	100%
(d) Foster product and technology development activities among students and faculty by facilitating engagement with government and industry partners.	Number of product / technology development projects completed **(Goal: 1 per technology department per year)**	5	5	5	5	5	25 (5 years)	25 (5 years)
(e) Prioritize the development of students' skills and knowledge to enhance their employability with a focus on defence and advanced technology domains	Number of Student Development Programs conducted **(Goal: At least 1 per Program per year)**	8	12	20	22	22	110 (5 years)	110 (5 years)

(2) Accreditations and Ranking

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Over the next five years, our goal is to secure a minimum grading of A+ from the National Assessment and Accreditation Council (NAAC) and	NAAC Accreditation Status **(Goal: A+)**	-	-	-	-	A+	A++	A++

a minimum score of 675 from the National Board of Accreditation (NBA).	Percentage of all programs with NBA Accreditation with a minimum score of 675 **(Goal: All programs of the University)**	-	-	-	-	100%	100%	100%
(b) Within the next five years, we aim to secure a rank within the coveted top 200 in the National Institutional Ranking Framework (NIRF)	NIRF Ranking Status **(Goal: At least a ranking below 100)**	-	-	-	-	<200 (End of 5th year)	<150 (End of 10th year)	<100 (End of 15th year)
(c) Actively pursue international accreditation and validate our commitment to meeting globally recognized quality standards	Number of international accreditations **(Goal: At least 6 prestigious global accreditations)**					1 (End of 5th year)	3 (End of 10th year)	6 (End of 15th year)
(d) Over the next ten years, we aspire to participate in renowned international rankings and secure a position within the top 500 universities globally	International Ranking Status **(Goal: At least a ranking below 500)**	-	-	-	-	-	<500 (End of 10th year)	<500 (End of 15th year)
(3) Placement and Student Support								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Provide comprehensive academic support services that cater to the diverse needs of our students	Number of tutoring programs, study groups and academic workshops conducted	4	13	15	16	16	80 (5 years)	80 (5 years)

	(Goal: At least 1 per year per program)							
(b) Preparing students for successful careers in the technological and defence sectors	Percentage of students involved in placement oriented training programs **(Goal: All students of the University)**	100%	100%	100%	100%	100%	100%	100%
(c) Holistic student well-being in achieving academic success and personal growth	Percentage of students utilising the comprehensive support systems like counselling services, health & wellness programs and recreational activities **(Goal: All students of the University)**	100%	100%	100%	100%	100%	100%	100%
(d) Nurturing well-rounded individuals with leadership potential	Percentage of students participating in extracurricular activities **(Goal: All students of the University)**	100%	100%	100%	100%	100%	100%	100%
(e) Strengthening Defence Recruitment Readiness	Number of coaching programs for defence recruitment entrance exams & selection processes **(Goal: At least 1 per year per program)**	-	12	20	22	22	110 (5 years)	110 (5 years)
(f) Facilitating Private Sector Placements	Percentage of students participating in campus **Industry Internship Trajectory Program**	-	50%	50%	50%	50%	50%	50%

	(Goal: At least 50% of the students)							
	Percentage of students placed through the campus **(Goal: At least 90% of the students)**	-	90%	90%	90%	90%	90%	90%
(g) Nurturing Entrepreneurial Ventures	Percentage of students becoming entrepreneurs **(Goal: At least 10% of the students)**	-	10%	10%	10%	10%	10%	10%
(4) Engagement with Alumni								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Create a vibrant and interconnected alumni network	Number of alumni engagement activities organised by University **(Goal: At least 1 per department)**	-	-	5	5	5	25 (5 years)	25 (5 years)
	Percentage of alumni engaged actively with University **(Goal: At least 50% of the alumni)**	-	-	50%	50%	50%	50%	50%
(b) Supporting the ongoing education and professional development of our alumni	Number of continuous development programs organised by University	-	-	5	5	5	25 (5 years)	25 (5 years)

	(Goal: At least 1 per department)							
	Percentage of alumni participating continuous development programs organised by University **(Goal: At least 50% of the alumni)**	-	-	10%	10%	10%	10%	10%
(c) Facilitating Mentorship and Career Guidance in supporting the professional growth of our alumni	Number of career advancement activities for alumni conducted by the University **(Goal: At least 1 per department)**	-	-	5	5	5	25 (5 years)	25 (5 years)
(d) Encourage our alumni to actively contribute to the growth and success of our university	Percentage of alumni visiting University for lecturing, partnership and advisory **(Goal: At least 10% of the alumni)**	-	-	10%	10%	10%	10%	10%
(5) Internationalisation								
Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(a) Promoting international exchanges and collaborations to foster a diverse and globally connected academic community	Cumulative Number of MoUs with global academic institutions **(Goal: At least 1 per year)**	1	2	3	4	5	10 (End of 10th year)	15 (End of 15th year)

(b) Providing students with international exposure and intercultural competencies	Percentage of students utilising study-abroad programs, international internships and other experiential learning opportunities **(Goal: At least 20% of the students)**	20%	20%	20%	20%	20%	20%	20%
*(c) Attract talented students and **faculty** from around the world, creating a vibrant and inclusive academic community*	Percentage of international students/faculty from abroad participating in University programs **(Goal: At least 10 per department per year)**	50	50	50	50	50	250 (5 years)	250 (5 years)
(d) Infuse global perspectives and cross-cultural understanding into our curriculum, ensuring that our students are equipped with a deep appreciation for diversity and a nuanced understanding of global issues	Percentage of all Programs with a curriculum containing an international component **(Goal: All programs)**	100%	100%	100%	100%	100%	100%	100%

Strategy for Internationalisation

The internationalization strategy outlined below is designed to elevate the university's academic plan to a global level.

Global Curriculum Integration	Collaborate with renowned international universities to integrate diverse perspectives into the curriculum. Offer joint courses or modules taught by faculty from partner institutions, ensuring students are exposed to a wide range of viewpoints.
Student Exchange Programs	Establish partnerships with universities worldwide for student exchange programs. This enables students to experience different learning environments, cultures, and educational methods, fostering a global mindset.
Faculty Exchange and Visiting Scholars	Invite international experts as visiting professors to share their expertise. Facilitate faculty exchange programs to encourage knowledge sharing and cross-cultural experiences among educators.
Dual and Joint Degree Programs	Develop dual or joint degree programs with reputable overseas universities. This provides students with the opportunity to earn degrees from both institutions, enhancing their employability on a global scale.
International Research Collaborations	Foster research collaborations with global institutions, enabling faculty and students to participate in joint research projects. This not only enriches research outcomes but also creates avenues for international networking.
Language and Cultural Proficiency	Incorporate language and cultural courses to prepare students for effective communication and interaction in a global context. Encourage participation in cultural events, workshops, and language exchange programs.
Online and Virtual Learning	Offer online courses, webinars, and virtual lectures in partnership with international experts. This provides students access to global expertise without geographical constraints.

Global Internships and Placements	Develop relationships with multinational companies and organizations to facilitate international internships and placements. This practical exposure enhances students' skills and global employability.
International Conferences and Symposia	Organize international conferences, symposia, and seminars on campus. Invite experts and scholars from around the world to share insights and engage in cross-disciplinary discussions.
Student Diversity and Inclusivity	Actively recruit international students, creating a diverse and inclusive campus environment. Establish support systems to help international students integrate and thrive.
Global Alumni Network	Establish a robust global alumni network to connect graduates from different parts of the world. This network can provide mentorship, job opportunities, and collaborations.
Cultural Exchanges and Study Tours	Organize study tours, cultural exchanges, and field trips to various countries. These experiences provide a holistic understanding of global issues and enhance students' cultural awareness.
Participation in International Rankings	Strive to participate in reputable international rankings and accreditations, showcasing the university's commitment to global academic standards.
International Outreach and Partnerships	Continuously explore and forge new international partnerships to expand the university's global network and collaborations.

Industry Trajectory Program (ITP)

The university is committed to providing practical exposure and real-world experience to our students. Through our *Industry Trajectory Program (ITP)*, we have forged partnerships with leading private defence and technology sector-related companies. This unique initiative offers our students a 6-month industry internship opportunity, strategically timed just before their graduation, lasting up to 1 year. During this period, students will actively engage as interns within these esteemed companies, gaining hands-on experience and valuable insights into their respective domains. At the conclusion of the internship, based on their performance and alignment with company objectives, students may receive pre-

placement offers for permanent positions. This program not only enhances their employability but also provides a significant opportunity to work alongside industry experts, fostering a dynamic learning environment. Even if direct recruitment doesn't occur, students will benefit from 6 months to 1 year of work experience, ensuring they graduate with a competitive edge and practical industry insights.

A number of companies in the private sector offering internship & placement opportunities include:

Electronics Corporation of India Limited	Bharat Dynamics	Bharat Electronics	Bharat Earth Movers
Mazagon Dock Limited	Garden Reach Shipbuilders & Engineers	Goa Shipyard	Hindustan Aeronautics Limited
Munitions India Limited (MIL)	Mishra Dhatu Nigam	Utkarsha Aluminium Dhatu Nigam Limited (UADNL)	Cochin Shipyard Limited
Yantra India Limited (YIL)	Armoured Vehicles Nigam Limited (AVANI)	Advanced Weapons and Equipment India Limited (AWE)	Troop Comforts Limited (TCL)
Aerolloy Technologies	India Optel Limited (IOL)	Gliders India Limited (GIL)	Adani Aero Defense Systems & Technologies
Apollo Micro Systems	Ashok Leyland Defence Systems	Alpha Design Technologies	Astra Microwave Products
CRON Systems	BrahMos Aerospace	Bharat Forge	Centum Electronics
Dynamatic Technologies	Crown Group	Data Patterns (India) Ltd	DCX Systems
High Energy Batteries Ltd.	EyeROV	Godrej & Boyce	HBL Power Systems
Kineco Limited	PTC Industries	Reliance Naval Shipyard	Kalyani Group

Tata Advanced Systems	Krishna Defence & Allied	Larsen & Toubro	Tardid Technologies
Triveni Engineering & Industries Limited	Texmaco Defence Systems	Titagarh Wagons	Tonbo Imaging
MKU	SSS Defence	Mahindra Aerospace	Mahindra Defence Systems Ltd
Punj Lloyd	Paras Defence And Space Technologies Ltd.	MTAR Technologies	Raphe Mphibr Pvt Ltd
Solar Industries India	Samtel Avionics	Sandeep Metalcraft Pvt Ltd	Sika Interplant Systems Ltd.
Optimized Electrotech	Torus Robotics	Vinveli	ideaForge

H. Financial Plan

Specific Objective	***Measure of Attainment***	***AY 2025-2026***	***AY 2025-2027***	***AY 2027-28***	***AY 2028-29***	***AY 2029-30***	***AYs 2030-31 to 2034-2035***	***AYs 2035-36 to 2039--2040***
(1) Ensuring Financial Sustainability and maintaining a sound financial foundation to support long-term growth and sustainability	The ratio of Operating Expenses to Revenues **(Goal: Not more than 0.80)**	1.20	1.13	1.06	0.94	0.92	0.82 (End of 10th year)	0.80 (End of 15th year)
(2) Explore and pursue diverse revenue generation opportunities to support the	Amount of Annual Operating Revenue of the University	Rs. **16** crores	Rs. **57** crores	Rs. **114** crores	Rs. **156** crores	Rs. **208** crores	Rs. **2294** crores (5 years)	Rs. **3818** crores (5 years)

university's strategic objectives	**(Goal: At least Rs. 200 crores per year)**							
(3) Maintaining robust financial controls and governance practices	Percentage of compliance to financial discipline **(Goal: 100%)**	100%	100%	100%	100%	100%	100%	100%
(4) Optimize the allocation of financial resources to support the university's strategic priorities	Amount of capital expenditure **(Goal: At least Rs. 20 crores per year)**	Rs. **10.80** crores	Rs. **27.15** crores	Rs. **31.50** crores	Rs. **26.25** crores	Rs. **21.60** crores	Rs. **100** crores (5 years)	Rs. **100** crores (5 years)
(5) Build reserves and contingency funds to address unforeseen circumstances, economic downturns, and emergencies	Amount of reserve fund in rupees crores **(Goal: Maintain at least Rs. 25 crores)**	Rs. **25** crores	Rs. **25** crores	Rs. **25** crores	Rs. **25** crores	Rs. **25** crores	Rs. **25** crores	Rs. **25** crores

Capital Expenditure Plan:

Years 1 to 5		
1	New Academic Buildings (340,000 square feet)	Rs. 68 crores
2	New Hostels (200,000 square feet)	Rs. 40 crores
3	Improvements / Other Fixed Assets	Rs. 12 crores
TOTAL INVESTMENT IN THE FIRST FIVE YEARS		***Rs. 120 crores***

Years 6 to 10		
1	New Academic Buildings (300000 square feet)	Rs. 60 crores

2	New Hostels (150000 square feet)	Rs. 30 crores
3	Improvements / Other Fixed Assets	Rs. 10 crores
TOTAL INVESTMENT IN THE SECOND FIVE YEARS		***Rs. 100 crores***

Years 11 to 15		
1	New Academic Buildings (300000 square feet)	Rs. 60 crores
2	New Hostels (150000 square feet)	Rs. 30 crores
3	Improvements / Other Fixed Assets	Rs. 10 crores
TOTAL INVESTMENT IN THE THIRD FIVE YEARS		***Rs. 100 crores***

Operating Cash Flow Projections:

Year	*Number of Students (excluding PhD students)*	*Average Annual Fees*	*Projected Total Revenue*	*Projected Total Operating Expenses*	*Projected Cash Surplus / Deficit*
1	360	Rs. 450000	Rs. 16 crores	Rs. 19 crores	**Rs. -3.2 crores**
2	1265	Rs. 450000	Rs. 57 crores	Rs. 64 crores	**Rs. -7.4 crores**
3	2315	Rs. 500000	Rs. 114 crores	Rs. 121 crores	**Rs. -6.8 crores**
4	3190	Rs. 500000	Rs. 156 crores	Rs. 147 crores	**Rs. 9.4 crores**
5	3910	Rs. 550000	Rs. 208 crores	Rs. 191 crores	**Rs. 16.6 crores**
6	4935	Rs. 575000	Rs. 297 crores	Rs. 267 crores	**Rs. 29.7 crores**
7	5815	Rs. 600000	Rs. 368 crores	Rs. 324 crores	**Rs. 44.2 crores**
8	6930	Rs. 625000	Rs. 454 crores	Rs. 390 crores	**Rs. 63.5 crores**
9	8020	Rs. 650000	Rs. 553 crores	Rs. 465 crores	**Rs. 88.5 crores**
10	8740	Rs. 675000	Rs. 622 crores	Rs. 510 crores	**Rs. 111.9 crores**
11	9280	Rs. 700000	Rs. 693 crores	Rs. 554 crores	**Rs. 138.6 crores**
12	9460	Rs. 725000	Rs. 724 crores	Rs. 579 crores	**Rs. 144.9 crores**
13	9640	Rs. 750000	Rs. 772 crores	Rs. 618 crores	**Rs. 154.4 crores**
14	9700	Rs. 775000	Rs. 795 crores	Rs. 636 crores	**Rs. 158.9 crores**
15	9760	Rs. 800000	Rs. 834 crores	Rs. 667 crores	**Rs. 166.8 crores**

IV. CONCLUSION

NTS, as a deemed-to-be university, aims to develop talent suited for the defence sector through interdisciplinary and multidisciplinary teaching and research. By focusing on advanced defence systems, satellite technology, cyber warfare, and more, the university aims to foster indigenous development and reduce import dependency. Industry-academic partnerships will spur technological advancements and entrepreneurship, reinforced by research centers and global collaborations.

Committed to quality education, experiential learning, and personalized attention, NTS will empower students to become confident, skilled, and ethical graduates. With a focus on social transformation aligned with NEP 2020, the university will contribute to the nation's progress. NTS is poised to play a pivotal role in India's journey towards self-reliance and leadership in defence technology, ultimately enhancing the nation's preparedness in a rapidly evolving global landscape.

We request your esteemed approval for the establishment of the "**NPS-NVT Institute of Advanced Technological Studies**" (NTS) as a ***Deemed-to-be-University*** *under* ***"Distinct Category"***. With the dynamic global security landscape and the escalating demand for cutting-edge defence technologies, a specialized institution focused on defence technology education has become an imperative need in India. As the apex regulatory body for higher education, your endorsement holds the key to propelling excellence in this critical domain. In the forthcoming years, as India navigates through intricate security challenges and strives for self-reliance in defence, NTS envisions playing a pivotal role in nurturing a skilled workforce adept in addressing the evolving requirements of the defence sector. Your approval would provide the much-needed affirmation of NTS's commitment to quality education, advanced research, and fostering innovation in defence technology. With your support, NTS aims to not only contribute to the nation's preparedness but also elevate India's global standing as a leader in defence technology education. We kindly request your esteemed approval, which will undoubtedly be a cornerstone in India's journey towards achieving excellence in this vital sector in the years ahead.

We wish to emphasize our unwavering commitment to creating substantial value for all stakeholders involved, should we be granted the opportunity to establish the "NPS-NVT Institute of Advanced Technological Studies" (NTS). With the esteemed UGC's approval, we are dedicated to harnessing the potential of this institution to its fullest extent. Our overarching

goal is to ensure that students receive an exceptional and holistic education that equips them with the skills, knowledge, and ethical values necessary to thrive in the defence technology domain. We are committed to nurturing their talents, fostering innovation, and empowering them to become proficient leaders in the sector. Simultaneously, we pledge to collaborate with the industry, defence establishments, and global academia to establish mutually beneficial partnerships that enable cutting-edge research, technological advancement, and real-world applications. By doing so, we aim to contribute significantly to the nation's technological self-reliance and global leadership in defence technology. We assure all stakeholders that we will dedicate our resources, expertise, and relentless effort to uphold the highest standards of excellence, thereby creating enduring value and making a positive impact on India's defence preparedness and progress.

V. ANNEXURES

1. Annexure-A: Proposed Departments & Programs (As per approved nomenclature of courses by AICTE)

Department	*Graduate-level Programs*	*Post-graduate-level Programs*	*Doctoral-level Programs*
SCHOOL OF DEFENCE ENGINEERING	**Bachelor of Technology in Mechanical Engineering** *Specialisations:* (1) Marine & Naval Engineering (2) Combat Vehicles (3) Electric Vehicles (4) Robotics	**Master of Technology in Defence Technology** *Specialisations:* (1) System Engineering (2) Ship Building (3) Combat Vehicles & Weapon Technology (4) Robotics & IoT (5) Missile Engineering (6) Weapon Engineering (7) Nuclear Engineering	**PhD** in Defence Technology
	Bachelor of Technology in Aerospace Engineering *Specialisations:* (1) Structures and Design (2) Aerodynamics Engineering (3) Aerospace Propulsion	**Master of Technology in Aerospace Engineering** *Specialisations:* (1) Guided Missiles (2) Air Armaments and UAVs (3) Structures and Design (4) Aerodynamics Engineering (5) Aerospace Propulsion	
	Bachelor of Technology in Electronics & Communication *Specialisations:* (1) VLSI and Embedded systems (2) Avionics	**Master of Technology in Advanced Electronics & Communication** *Specialisations:* (1) RF and Microwave Engineering (2) Digital Signal Processing	

Department	*Graduate-level Programs*	*Post-graduate-level Programs*	*Doctoral-level Programs*
		(3) VLSI and Embedded systems (4) Control Systems (5) Power Electronics (6) Radar and Communication (7) Defence Electronics Systems	
No. of Programs	*3*	*3*	*1*
SCHOOL OF COMPUTER SCIENCE & MATHEMATICS	**Bachelor of Technology in Computer Science** *Specialisations:* (1) Cyber Security (2) Artificial Intelligence & Machine Learning (3) Networking (4) Mobile Computing (5) Operating Systems	**Master of Technology in Computer Science** *Specialisations:* (1) Quantum Computing (2) Digital Forensics (3) Cyber Security (4) Machine Learning & Artificial Intelligence (5) Networking (6) Block Chain	**PhD** in Computer Science
	Bachelor of Technology in Artificial Intelligence and Data Science *Specialisations:* (1) Data Analytics	**Master of Technology in Artificial Intelligence and Data Science** *Specialisations:* (1) Data Mining (2) Big Data Analytics (3) Modelling & Simulation	**PhD** in Advanced Data Science
No. of Programs	*2*	*2*	*2*
SCHOOL OF TECHNOLOGY MANAGEMENT & SOCIAL SCIENCE	**Bachelor of Business Management** in: *Specialisations:* (1) Human Resource Management (2) Finance Management (3) Marketing Management	**Master of Business Administration** *Specialisations:* (1) Leadership & Human Resources (2) Project Management (3) Operations & Quality Management	PhD in Management

Department	*Graduate-level Programs*	*Post-graduate-level Programs*	*Doctoral-level Programs*
	(4) International Business Management (5) Business Analytics	(4) Logistics & Supply Chain (5) Finance (6) Business Analytics (7) Marketing (8) Technology Management	**PhD** in Technology Management
No. of Programs	*1*	*1*	*2*
SCHOOL OF INFRASTRUCTURE & SUSTAINABLE ENGINEERING	**Bachelor of Technology in Civil & Infrastructure Engineering** *Specialisations:* (1) Construction Engineering and Management (2) Structural Engineering (3) Modern Construction Material and Technology (4) Safety in Construction Engineering	**Master of Technology in Infrastructure Engineering and Technology** *Specialisations:* (1) Environmental Impact Assessment; (2) Environmental and Water Resource Engineering; (3) Geotechnical Engineering; (4) Earthquake Resistance Design of Structures; (5) Sustainable Development and Urban Planning; (6) Maintenance and Rehabilitation of Structures; (7) Disaster Mitigation and Management (8) Value Engineering; (9) Bridge Engineering	**PhD** in Infrastructure Engineering and Technology
No. of Programs	*1*	*1*	*1*

Department	*Graduate-level Programs*	*Post-graduate-level Programs*	*Doctoral-level Programs*
SCHOOL OF PUBLIC POLICY	**Bachelor of Arts** *Specialisations:* (1) Public Policy	**Masters of Arts** *Specialisations:* (1) Public Policy (2) Defence Studies	**PhD** in Public Policy
No. of Programs	*1*	*1*	*1*
Total No. of Programs	***8***	***8***	***6***

2. Annexure-B: Proposed Lab Facilities

Department	*Proposed Lab Facilities*
SCHOOL OF DEFENCE ENGINEERING	1. Advanced Propulsion and Laser Diagnostics (APLD) 2. Aerodynamics Lab 3. Flight Mechanics Lab 4. Flow Engineering Lab 5. Thermal and Propulsion Lab 6. Aerospace Structures Lab 7. Strength of Materials Lab 8. Temp/pressure Calibration Facility 9. Engineering Drawing Lab 10. Manufacturing Processes Lab 11. Experimental Composite Micromechanics Lab 12. Engineering Workshop/Basic Engineering Lab 13. Material Characterization/ Physical Metallurgy Lab 14. Engineering Workshop/Basic Engineering lab 15. Analog Electronics Lab 16. Digital Electronics Lab 17. VLSI and Microsystems Laboratories 18. RF and Microwave Lab 19. Microprocessors and Microcontrollers Lab 20. Control System Lab 21. Power Electronics Lab 22. Instrumentation and Measurement Lab 23. Nano-Satellite Lab 24. Digital Signal Processing Lab 25. Communication Systems Lab 26. Navigation System and Sensors Lab
SCHOOL OF COMPUTER SCIENCE & MATHEMATICS	1. Digital Forensics Lab 2. Cyber Security Lab 3. Modelling & Simulation Lab 4. Virtual Reality Lab 5. Computer-Aided Design and Analysis Lab 6. Image Processing and Computer Vision Lab 7. Computer Networks Lab
SCHOOL OF TECHNOLOGY MANAGEMENT & SOCIAL SCIENCE	1) Business Analytics Lab 2) Financial Technology Lab 3) Digital Marketing Lab
SCHOOL OF INFRASTRUCTURE & SUSTAINABLE ENGINEERING	1) Concrete Technology Lab 2) Environmental Engineering Lab 3) Geo Technical Engineering Lab 4) Structural Engineering Lab 5) Surveying Lab 6) Water Resources Engineering Lab
SCHOOL OF PUBLIC POLICY	1) e-Governance Lab 2) Model United Nations Lab

3. Annexure-C: Proposed Land Requirement Calculations & Physical Infrastructure Planning

Below given are the extracts of Land Requirement Guidelines extracted from AICTE guidelines, based on the academic discipline. (The proposed departments of NVT are classified into two segments: (1) Engineering & Technology and (2) Management & Public Policy:

Engineering & Technology Disciplines			
	Minimum Requirement		*SqMtr Requirement*
Classrooms	0.5	x No of divisions	66
Tutorial Rooms	25%	of total no of classrooms	33
Laboratory for First Year	4	(2 must be for basic sciences)	66
Laboratory for other than First Year	2	per course per year	66
Workshop	2		200
Additional Lab (for advanced technology courses)	1		150
CAD Centre	1		132
Computer Centre	2		150
Seminar Hall	1		132
Library	1		300
Language Laboratory	1		33

Management & Public Policy Disciplines			
	Minimum Requirement		*SqMtr Requirement*
Classrooms	1	x No of divisions	66
Tutorial Rooms	25%	of total no of classrooms	33
Computer Centre	1		150
Seminar Hall	1		132
Library	1		100

Administrative Area			
	Minimum Requirement		*SqMtr Requirement*
Principal/Director	1		30
Board Room	1		20
Office	1		300
HOD Cabin	1	per department	20
Faculty Rooms	0.067	per first year student intake	5

Central Stores	1		30
Maintenance	1		10
Security	1		10
Housekeeping	1		10
Pantry	1		10
Exam Control	1		30
Placement	1		30

Amenities Area			
	Minimum Requirement		*SqMtr Requirement*
Toilets	1		350
Boys common room	1		100
Girls common room	1		100
Cafeteria	1		150
Stationary store	1		10
Sick room	1		10
Principal's Quarters	1	Optional	150
Guest House	1	Optional	30
Sports club	1	Optional	200
Auditorium	1	Optional	400
Boys Hostel	1	Optional	
Girls Hostel	1	Optional	

In the below tables a detailed computation of land requirement for meeting all the above physical infrastructure requirements for the proposed deemed to be university are presented for the first 15 years of operations:

Engineering & Technology Discipline															
Years	***No of students***	***No of Divisions***	***No of Classrooms***	***Tutorial Classrooms***	***No of Courses***	***Laboratories***	***Additional Lab***	***Computer Centre***	***Workshop***	***Drawing Hall***	***Seminar Hall***	***Library***	***Language Lab***	***Minimum Total Carpet Area (in SQMTR)***	***Minimum Total Carpet Area (in SQFT)***
1	0	0	0	0	0	4	1	2	2	2	1	1	1	**0**	**0.00**
2	540	9	4.5	2	10	4	1	2	2	2	1	1	1	**1858**	**19999.35**
3	1210	21	10.5	3	14	22	1	2	2	2	1	1	1	**3475**	**37404.59**
4	1705	29	14.5	4	16	26	1	2	2	2	1	1	1	**4036**	**43443.14**
5	2150	36	18	5	16	28	1	2	2	2	1	1	1	**4432**	**47705.65**
6	2900	49	24.5	7	16	28	1	2	2	2	1	1	1	**4927**	**53033.79**
7	3760	63	31.5	8	16	28	1	2	2	2	1	1	1	**5422**	**58361.92**
8	4855	81	40.5	11	16	28	1	2	2	2	1	1	1	**6115**	**65821.31**
9	5940	99	49.5	13	16	28	1	2	2	2	1	1	1	**6775**	**72925.49**
10	6660	111	55.5	14	16	28	1	2	2	2	1	1	1	**7204**	**77543.21**
11	7200	120	60	15	16	28	1	2	2	2	1	1	1	**7534**	**81095.30**
12	7380	123	61.5	16	16	28	1	2	2	2	1	1	1	**7666**	**82516.14**
13	7560	126	63	16	16	28	1	2	2	2	1	1	1	**7765**	**83581.76**
14	7620	127	63.5	16	16	28	1	2	2	2	1	1	1	**7798**	**83936.97**
15	7680	128	64	16	16	28	1	2	2	2	1	1	1	**7831**	**84292.18**

Management & Public Policy Discipline										
Years	***No of students***	***No of Divisions***	***No of Classrooms***	***Tutorial Classrooms***	***No of Courses***	***Computer Centre***	***Seminar Hall***	***Library***	***Minimum Total Carpet Area in SQMTR)***	***Minimum Total Carpet Area in SQFT)***
1	0	0	0	0	0	4	1	2	**844**	**9084.74**
2	540	9	4.5	2	10	4	1	2	**1273**	**13702.46**
3	1210	21	10.5	3	14	24	1	2	**1801**	**19385.80**
4	1705	29	14.5	4	16	32	1	2	**2263**	**24358.73**
5	2150	36	18	5	16	36	1	2	**2560**	**27555.61**
6	2900	49	24.5	7	16	36	1	2	**2923**	**31462.91**
7	3760	63	31.5	8	16	36	1	2	**2923**	**31462.91**
8	4855	81	40.5	11	16	36	1	2	**2923**	**31462.91**
9	5940	99	49.5	13	16	36	1	2	**2923**	**31462.91**
10	6660	111	55.5	14	16	36	1	2	**2923**	**31462.91**
11	7200	120	60	15	16	36	1	2	**2923**	**31462.91**
12	7380	123	61.5	16	16	36	1	2	**2923**	**31462.91**
13	7560	126	63	16	16	36	1	2	**2923**	**31462.91**
14	7620	127	63.5	16	16	36	1	2	**2923**	**31462.91**
15	7680	128	64	16	16	36	1	2	**2923**	**31462.91**

Administration Area														
Years	***Principal/Directo***	***Board Room***	***Office***	***HOD***	***Faculty Rooms***	***Central Stores***	***Maintenance***	***Security***	***Housekeeping***	***Staff pantry***	***Exams Control***	***Placements***	***Minimum Total Carpet Area in SQMTR)***	***Minimum Total Carpet Area in SQFT)***
1	30	20	300	40	120	30	10	10	10	10	30	30	**640**	**6888.90**
2	30	20	300	100	301.66	30	10	10	10	10	30	30	**882**	**9490.18**
3	30	20	300	100	420	30	10	10	10	10	30	30	**1000**	**10763.91**
4	30	20	300	100	443.33	30	10	10	10	10	30	30	**1023**	**11015.07**
5	30	20	300	100	481.66	30	10	10	10	10	30	30	**1062**	**11427.68**
6	30	20	300	100	705	30	10	10	10	10	30	30	**1285**	**13831.62**
7	30	20	300	100	765	30	10	10	10	10	30	30	**1345**	**14477.46**
8	30	20	300	100	966.66	30	10	10	10	10	30	30	**1547**	**16648.18**
9	30	20	300	100	966.66	30	10	10	10	10	30	30	**1547**	**16648.18**
10	30	20	300	100	1046.66	30	10	10	10	10	30	30	**1627**	**17509.29**
11	30	20	300	100	1046.66	30	10	10	10	10	30	30	**1627**	**17509.29**
12	30	20	300	100	1066.66	30	10	10	10	10	30	30	**1647**	**17724.57**
13	30	20	300	100	1066.66	30	10	10	10	10	30	30	**1647**	**17724.57**
14	30	20	300	100	1066.66	30	10	10	10	10	30	30	**1647**	**17724.57**
15	30	20	300	100	1066.66	30	10	10	10	10	30	30	**1647**	**17724.57**

Amenities Area								
Years	***Toilets***	***Boys common room***	***Girls common room***	***Cafeteria***	***Stationary etc***	***Sick room***	***Minimum Total Carpet Area in SQMTR)***	***Minimum Total Carpet Area in SQFT)***
1	700	100	100	150	10	10	**1070**	**11517.38**
2	1750	100	100	150	10	10	**2120**	**22819.49**
3	1750	100	100	150	10	10	**2120**	**22819.49**
4	1750	100	100	150	10	10	**2120**	**22819.49**
5	1750	100	100	150	10	10	**2120**	**22819.49**
6	1750	100	100	150	10	10	**2120**	**22819.49**
7	1750	100	100	150	10	10	**2120**	**22819.49**
8	1750	100	100	150	10	10	**2120**	**22819.49**
9	1750	100	100	150	10	10	**2120**	**22819.49**
10	1750	100	100	150	10	10	**2120**	**22819.49**
11	1750	100	100	150	10	10	**2120**	**22819.49**
12	1750	100	100	150	10	10	**2120**	**22819.49**
13	1750	100	100	150	10	10	**2120**	**22819.49**
14	1750	100	100	150	10	10	**2120**	**22819.49**
15	1750	100	100	150	10	10	**2120**	**22819.49**

Total Area [= (1) Engineering & Technology + (2) Management & Public Policy + (3) Administration + (4) Amenities]					
Years	***Total Carpet Area in SQMTR***	***Circulation Area in SQMTR***	***Total Carpet Area in SQMTR***	***Total Carpet Area in SQFT***	***Minimum Acres Required (FAR of 2.5; Minimum Land area = 1.5 acres)***
1	2554	639	3193	34364	1.5
2	6133	1533	7666	82514	1.5
3	8396	2099	10495	112967	1.5
4	9442	2361	11803	127046	1.5
5	10174	2543	12717	136886	1.5
6	11255	2814	14069	151435	1.5
7	11810	2953	14763	158902	1.5
8	12705	3176	15881	170940	1.57
9	13365	3341	16706	179820	1.65
10	13874	3468	17342	186669	1.71
11	14204	3551	17755	191109	1.75
12	14356	3589	17945	193154	1.77
13	14455	3614	18068	194486	1.79
14	14488	3622	18110	194930	1.79
15	14521	3630	18151	195374	1.79

4. Annexure-D: Current Available Land and Building Availability

A) Land Area

Land	Registration Details (In the Name of NVT Quality Educational Trust)	Sale / Lease Deed	Area (Acres)
1	936/12/13 dated 17/05/2012	Sale Deed	1.075
2	BK1 121 2011-12 dated 08/04/2011	Sale Deed	0.562
3	3011/11-12 dated 19/09/2011	Sale Deed	0.100
4	BK1 933 2012-13 dated 17/05/2012	Sale Deed	0.300
5	SJR 1 4965 Dated 12th Sep 2022 and BK-1/6703/23-23 dated 25.10.2023	Lease Deed (30 years)	2.8125
		Total	**4.8495 Acres (Contiguous)**
	Note: Above Lands are contiguous		
6	Future Plans		**20 Acres**

B) **Current Completed Building Details** (On 4.8495 Acres)

Current Building Approval Details:

Plan Approved by **ANEKAL PLANNING AUTHORITY, BMRDA**

- Approval No. Site Plan 33/596/1213 Dated 24/12/2012
- Approval No. Site Plan 33/596/2012.13 Dated 06/04/2018
- Approval No. Building Plan 33/596/2012.13 Dated 24/12/2018
- Approval No. Building Plan 33/596/2012.13 Dated 06/04/2018

Area Statement - ACADEMIC BLOCK 1			
		Area in Sqm	**Area in Sft**
Ground Floor		1170.24	12,596.57
First Floor		1180.78	12,710.02
Second Floor		1228.91	13,228.20
Third Gloor		1224.26	13,178.68
Fourth Floor		1240.19	13,349.51
	TOTAL	**6044.38**	**65,062.98**
Area Statement - ACADEMIC BLOCK 2			
Ground Floor		246.13	2649.45
First Floor		246.13	2649.45
Second Floor		246.13	2649.45
Third Gloor		246.13	2649.45
	TOTAL	**984.52**	**10,597.80**
Area Statement - Hotel BLOCK		**Area in Sqm**	**Area in Sft**
Ground Floor		964.97	10,387.00
First Floor		942.67	10147.00
Second Floor		942.67	10147.00
Third Gloor		942.67	10147.00
Fourth Floor		942.67	10147.00
	TOTAL	**4735.65**	**50,975.00**

Total BUA - Academic	75,659.80 sft
Total BUA - Hostel	50,975 sft
TOTAL – BUA	**1,26,635.75 sft**

Academic Block 1:

Academic Block 2 & Hostel:

C) Proposed Building Details (On 4.8495 Acres)

Area Statement - ACADEMIC BLOCK		
	Area in Sqm	**Area in Sft**
Ground Floor	2,369.89	25,509.50
First Floor	2,184.15	23,510.19
Second Floor	2,038.74	21,945.00
Third Gloor	1,981.74	21,331.45
Fourth Floor	1,848.09	19,892.84
Fifth Floor	1,848.09	19,892.84
Terrace Floor	213.89	2,302.31
TOTAL	**12,484.59**	**1,34,384.13**

Area Statement - Hotel		
	Area in Sqm	**Area in Sft**
Ground Floor	1,153.00	12,410.89
First Floor	1,148.15	12,358.69
Second Floor	1,308.16	14,081.03
Third Gloor	1,308.16	14,081.03
Fourth Floor	1,308.16	14,081.03
Fifth Floor	1,308.16	14,081.03
Sixth Floor	1,308.16	14,081.03
Seventh Floor	1,308.16	14,081.03
Terrace Floor	99.86.00	1,074.89
Total	**10,249.97**	**1,10,330.68**
Total BUA Academic	1,34,384.13 Sft	
Total BUA Hostel	1,10,330.68 Sft	
TOTAL BUA	**2,44,714.80 Sft**	

Proposed Academic Block – Front View

Proposed Academic Block – Rear View

Proposed Academic Block – Side View

Proposed Hostel Block