



CENTRE FOR SUSTAINABLE DEVELOPMENT

Vels Institute of Science, Technology & Advanced Studies (VISTAS)

About the Centre

The Centre for Sustainable Development (CSD) at Vels Institute of Science, Technology & Advanced Studies (VISTAS) is a forward-thinking initiative committed to advancing knowledge, innovation, and best practices that support a sustainable future. The Centre functions as a multidisciplinary platform that integrates education, research, and community engagement to address critical environmental, social, and economic challenges.

CSD aligns its objectives with the global framework of the United Nations Sustainable Development Goals (SDGs), promoting responsible and impactful solutions in areas such as climate action, resource efficiency, biodiversity conservation, and inclusive development.

Mission

To empower students, researchers, and communities with the knowledge, skills, and tools necessary to develop sustainable solutions for real-world challenges through innovation, collaboration, and education.

Vision

To emerge as a leading centre of excellence in sustainable development by fostering interdisciplinary research, nurturing responsible leadership, and driving meaningful change at local, national, and global levels.

Key Focus Areas

- Climate Change and Environmental Protection
- Renewable Energy and Clean Technologies
- Sustainable Agriculture and Food Systems

- Water Resource Management
- Urban Sustainability and Smart Cities
- Waste Management and Circular Economy

Future Initiatives

- Undertake cutting-edge research and innovation projects
- Organize training programs, workshops, and awareness campaigns
- Establish collaborations with industries, government agencies, and non-governmental organizations
- Encourage and support student-led sustainability initiatives
- Provide consultancy services and policy recommendations

Our Commitment

The Centre is dedicated to fostering a greener and more equitable future by promoting sustainable practices both within the campus and in the broader community. Through collaboration, innovation, and continuous learning, CSD strives to embed sustainability as a fundamental way of life.

Members of CSD:

Chairperson: Dr.T. Sasipraba
Vice -Chancellor
VISTAS

Management Representative: Dr Preethaa Ganesh, Vice President

Members

1. Dr. RA Kalaivani – Dean , School of Basic Sciences
2. Dr. P.Shanmugasundaram- Dean, School of Pharmacy
3. Dr Arun S- Dean IQAC
4. Dr. A.K.Kathiresan,-Director, School of Life Sciences
5. Dr.Preethi Sheshadri- Director, International Relations
6. Dr.Yuvaraj- Research Faculty
7. Dr.Dharmarajan - Associate Director- Digital Infrastructure.

Department Sustainable Development Coordinators

Name of the Co-ordinator	Designation	Name of the Departments
Dr.R.Sudha	Associate Professor	Chemistry
Dr S Rajagopal	Assistant Professor	Physics
Dr.K.Srinivasan	Assistant Professor	Mathematics
Dr.P.Amudha	Assistant Professor	Biochemistry
Ms. N. Mayurikaa	Assistant Professor	Microbiology
Dr J Vardhana	Assistant Professor	Biotechnology
Mrs.Shanmugavani	Assistant Professor	Bioinformatics
Dr.k.Nandhini	Assistant Professor	Computer Applications -PG
Dr K Dharmarajan	Professor	Computer Applications -UG
Dr.B.Booba	Professor	Applied Computing and Emerging Technologies (DACE)
Dr. A. Akila	Professor	Computer Science & Information Technology (DCSIT)
Dr.K.Abirami	Assistant Professor	Advanced Computing and Analytics (DACA)
Dr.V.Vetrivel	Assistant Professor	BBA
Dr.G.Amutha	Associate Professor	MBA
Dr.Murugesan D	Professor	Commerce: General
MS.J.SHERLI	ASSISTANT PROFESSOR	Commerce: Accounts & Finance
Dr.Majini Jes Bella	Assistant professor	Commerce: C.A
Dr.V.Andal	Associate professor & Head	Commerce :Professional Accounting - Integrated CAProgram)
Dr.M.Prathapan	Associate Professor	B.Com (Corporate Secretaryship)
Dr.S.Bhuvaneswari	Assistant Professor	Economics
A.Arun	Assistant Professor	HCM
Sumathi M	Assistant Professor	Animation

S.B.Lakshmi Narayanan	Assistant Professor	Visual Communication
Dr.C.Markandan	Associate Professor	Tamil
Dr.Arun Kumar	Assistant Professor	English
Dr. Poornima S	Asst.Professor & Head	Hindi
Saranya C	Assistant Professor	French
Mrs. Archana Mandava	Assistant Professor	Pharmaceutical Sciences
Mr. Kamarajan.M	Assistant Professor	ECE
Dr.M.Ruban	Associate Professor	Mechanical Engg.
Ms.M.Nivedhitha	Assistant Professor	Civil Engg.
Dr.P.Thilakavathy	Assistant Professor	Computer Science and Engg.
Dr.G.Revathy	Assistant Professor	Artificial Intelligence & Machine Learning
S.Sethu	Assistant Professor	Data Science and Information Technology
Dr. N. Janaki	Assistant Professor	Electricals and Electronics Engg.
Dr.A.Sai Ramesh	Assistant Professor	Bio - Engineering
Dr R Chandrasekaran	Assistant Professor	Biomedical Engg
Ms.Lavanya.D	Assistant Professor	Allied Health Sciences
Dr.Arvind Kishor	HOD Naval Architecture	Marine/Nautical/Naval Arch
Ms. R. Akshaya	Assistant Professor	Legal Studies
Karthikesan. S	Assistant Professor	Music & Fine Arts
Mr. Vigneshwaran	Assistant Professor	Aviation
Mr. S. Manibharathi	Assistant Professor	Agriculture
Dr.K.Sheeba	Associate Professor	Education
Ms. R. Siva Anandhi	Assistant Professor	Physiotherapy

Dr.Lalitha Shanmugam	MEU Coordinator, Professor of Physiology	Medicine
Ms. Priyanka .B	Tutor	Nursing
Mrs. P. Pravallika	Assistant Professor	Pharmacy
Ms. Aysha Farsana. S	Assistant Professor	Physiotherapy





CENTRE FOR ENERGY AND ALTERNATIVE FUELS

1.0 Vision and Mission of the CEAF

1.1 Vision of the Centre

To be the leading University-based research centre providing value-driven and real-world solutions, thereby enabling VISTAS to acquire, manage and execute educationally relevant and economically sound research programs in energy sector

1.2 Mission of the Centre

To enable the achievement of excellence, CEAF

- Promotes multidisciplinary research activities focused on the various aspects of energy technology and systems in the form of research, teaching and consultancy.
- Developing strong infrastructural facilities for the interdisciplinary energy research through the externally funded research projects.
- Supports the VISTAS faculties to perform energy related research at par with the global research community.
- Providing training opportunities to the diverse student community under the mentorship of the faculties of the centre.

- Initiating interdisciplinary research in cutting edge energy technologies through the doctoral candidates associated with the centre.

2.0 Introduction/Overview of the CEAF

2.1 Introduction

According to International energy agency report, India needs a green energy revolution or otherwise it become major source of global CO₂ emission. Though, in current scenario, CO₂ emission in India (7 %, 2018) stands in third position in comparison to China (28 %, 2018) and America (15 %, 2018), about 80 % of energy produced to meet its day-to-day energy demand is by burning coals, the major source of CO₂ emission. Also, keeping in mind the fast growth of Indian economy, there is an urgent need for advanced energy technologies providing rich set of options to address the energy challenges. However, largescale deployment of energy technologies requires continued improvements in cost and performance. Hence, Indian government urges the academic institutions to carry out research and development (R&D) in energy technologies, which can underpin the technology advancement, meeting the India's green energy revolution. Various top most national and private academic institutes set-up research centres as well as interdisciplinary departments to promote R&D activities on energy technologies.

2.2 Overview of CEAF

Centre for Energy and Alternative Fuels (CEAF) has been established in Feb' 2017 at VISTAS to promote multidisciplinary activities focused on various aspects of energy technology and systems in the form of research, teaching and consultancy. As the budding research center, the present research activities in the center are in the form of projects-based research funded by various national

funding agencies and Industries. By looking into the potential and application of different energy resources from the southern region of India, it is emphasized that the center gives priority to activities in the field of energy storage systems such as batteries and supercapacitors, microbial fuel cells, bio-sensors, alternative fuels and the efficiency studies of the energy systems etc.

4.0	List of the Project Completed, Ongoing and Submitted (In last 5 years)		
	Completed Projects	:	4
	Ongoing Project	:	1
	Submitted Projects	:	5

Completed Projects (External funding)

S.No.	Name of PI	Title of the Project	Name of the Funding Agency	Department	Amount sanctioned (INR in Lakhs)
1.	Dr. R.A. Kalaivani	Synthesis and characterization of graphene by chemical and electrochemical methods – 2013 / 3 years	DMSRDE, DRDO	CEAF	9.8
2.	Dr. R.A. Kalaivani	Design, development and prototype production of magnesium water activated battery for MAV applications – 2014 /2 years	ARDB, DRDO	CEAF	10.0
3.	Dr. S. Raghu Dr. R.A. Kalaivani	Synthesis and characterization of carbon nanosheets from hemp fiber and its application in supercapacitors – 2016 /1.5 years	BOHECO, Mumbai	CEAF	14.5
4.	Dr. S. Raghu	Studies on sodium-ion storage mechanism in amorphous carbon (hard & soft) materials – 2017 / 3 years	DST-SERB	CEAF	28.02
5.	Dr. S. Raghu Dr. R.A. Kalaivani	Development of high energy and high power density fuel cell supercapacitors – 2017 /2 years	DST-MES'2017	CEAF	66.80
6.	Dr. A.M. Shanmugharaj Dr. S. Raghu Dr. R.A. Kalaivani	Novel self-healing polymers for the development of high energy density, long cycle life batteries – 2019 / 1 year	NRB, New Delhi	CEAF	6.5
7.	Dr. A. M. Shanmugharaj Dr. R. A. Kalaivani	Mitigating Dendrite Growth Using Engineered Electrolyte Layers for the Development of High Energy Density, Long Cycle Life Lithium Batteries – 2018 / 4 years	Materials for Energy Storage (MES), DST, New Delhi	CEAF	64.63
8.	Dr. S. Senthilvelan,	Manufacturing Solutions for the Preparation of Siddha Medicines (Traditional	MHRD – IMPRINT	CEAF	115.97

	IIT Guwahati (PI) Dr. R. A. Kalaivani, (Co-PI)	Medicines Originated from Tami Nadu) – 2019 / 1 year			
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Completed Projects (Extramural research grants)

S.No.	Name of PI	Title of the Project	Name of the Funding Agency	Department	Amount sanctioned (INR in Lakhs)
1.	Dr. A. Padmapriya	Development of Topical Cream using Biomass Waste – 2022 / 1 year	EDII, Department of MSME, Govt. of Tamil Nadu	CEAF	3.00
2.	Dr. R. A. Kalaivani	Production of clean hydrogen fuel through microwave-assisted catalytic conversion of marine waste plastics – 2022 / 1 year	EDII, Department of MSME, Govt. of Tamil Nadu	CEAF	2.00

Ongoing Projects

S.No.	Name of PI	Title of the Project	Name of the Funding Agency	Department	Amount sanctioned (INR in Lakhs)
1.	Dr. R.A. Kalaivani	Metal Organic Ionogels As Liquid Organic Hydrogen Carrier - 2024	DST/C3E/HFC-2023/2024/29	CEAF	100.00

Submitted Projects

S. No.	Name of the scheme/project/ endowment/chair	Name of the principal investigator/co-investigator (If any)	Name of the funding agency	Department	Funds Quoted (in lakhs)	Duration of the project
1.	Surface engineered 2D silicon nanosheets as high performance anode materials for lithium batteries	A. M. Shanmugharaj	DST Nanomission	CEAF	77.6	3 Years
2.	Development of self-rechargeable sodium-ion battery based on inorganic nanotubes with unique light assisted sodiation process and electrostrictive solid polymer electrolyte	A. M. Shanmugharaj	DST (Indo-Israel)	CEAF	43.5	2 Years
3.	Engineered electrode and electrolyte for the development of high power and high energy density dual ion batteries with long cycle life	A. M. Shanmugharaj	DST (Indo-Korea)	CEAF	47.0	3 Years
4.	MXenes based high performance electrode material for solid state flexible micro-supercapacitor	RA. Kalaivani S. Raghu	CPRI	CEAF	48.0	3 Years

5.0	Publication details			
	<ul style="list-style-type: none"> <li data-bbox="337 394 1414 625">➤ Eminent scholars of CEAF research team published several peer reviewed journal papers in various internationally recognized journals (SCI/SCI-E/WOS). In addition, team has also published papers in the journals listed in UGC care list. <li data-bbox="337 716 1414 877">➤ Master's and doctoral candidates, who are doing their Ph. D under the guidance of Centre's faculty presented their research outcomes in various international and national conferences as listed in the Table. <li data-bbox="337 968 1414 1073">➤ Faculties of the centre also made chapter contributions in various edited books and they are appended in the Table below. 			
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Total number of publications (Including all)</td> <td style="width: 5%; text-align: center;">:</td> <td style="width: 35%; text-align: right;">85</td> </tr> </table>	Total number of publications (Including all)	:	85
Total number of publications (Including all)	:	85		
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Journal Papers</td> <td style="width: 5%; text-align: center;">:</td> <td style="width: 35%; text-align: right;">50</td> </tr> </table>	Journal Papers	:	50
Journal Papers	:	50		
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Book chapters</td> <td style="width: 5%; text-align: center;">:</td> <td style="width: 35%; text-align: right;">4</td> </tr> </table>	Book chapters	:	4
Book chapters	:	4		
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">International and National Conferences</td> <td style="width: 5%; text-align: center;">:</td> <td style="width: 35%; text-align: right;">35</td> </tr> </table>	International and National Conferences	:	35
International and National Conferences	:	35		

6.0 Instrument facilities

Centre is well-equipped with basic infrastructural facilities for carrying out research works related energy storage applications as listed below. However, continuous research efforts are being made in equipping the CEAF with instruments necessary for thrust areas of the research.



- CEAF is equipped with glove box, which is a prerequisite battery research.
- Glove box (Model number Lab 2000) is procured from Etelux.

- CEAF is equipped with Neware battery analyzer (~100 channels)
- Electrochemical characterizations of coin cell batteries; supercapacitors; cylindrical cells can be done using the equipment



- CEAF is furnished with Biologic electrochemical workstation (BP 300), which can be used for basic electrochemical studies of batteries and supercapacitors.

➤ Vacuum oven (~200°C), procured from Sigma Scientifics, Chennai connected with table top vacuum motor is available in CEAF.




➤ CEAF is also equipped with Muffle furnace with operating temperature (~900°C)



➤ CEAF is furnished with hot press rolling machine (TOB China), which is used for electrode preparation



		<p>➤ CEAF is also equipped with pouch cell assembling unit (TOB China).</p>
	<p>In addition, CEAF is also equipped with</p> <ul style="list-style-type: none"> ➤ Automatic coating machine, ➤ Cell assembling and disassembling units, ➤ Oil baths, ➤ Electrode cutting machine and ➤ Weighing balances 	

7.0	Patents
	<p>CEAF has published sofar five patents in last five years and several patents relative to energy materials are in pipe-line</p> <p>Some key research areas where the patents have been filed includes</p> <ul style="list-style-type: none"> (i) Hemp fibre derived carbon nanosheets for energy storage applications (ii) Biomass derived carbon and energy applications (iii) Silicon nanosheet based anode materials for lithium-ion batteries (iv) Metal doped carbon dots as electrolyte additive for lithium-ion batteries (v) Self-healing polymeric binders for lithium-ion batteries

S. No	Name of the Teacher	Patent Number	Title of the patent	Year of Award / publish of patent
1	Dr. S. Raghu Dr. RA. Kalaivani Dr. G. S. Sundari Dr. E. Senthil	201641041463/dated 26.09.2017	Electrochemical In-situ Hydrogen storage for Nanoporous Carbonaceous and Metal-doped Carbonaceous Materials	2017
2	Dr. S. Raghu Dr. RA. Kalaivani Dr. K. T. Kumar Dr. E. Senthil	201841044783/dated 28-11-2018	A Method for Synthesis of Electroactive Nanoporous Carbon Material from a Plant Fibre and use Thereof	2018
3	Dr. RA. Kalaivani Dr. S. Raghu Dr. A. M. Shanmugaraj Mrs. S. Lalitha	201941005661/dated 22-02-2019	Process for Treating Sewage Water Treatment by Cationic Coagulant	2019
4	Dr. S. Raghu Dr. RA. Kalaivani, Dr. A. M. Shanmugaraj Dr. G. S. Sundari. Dr. K. T. Kumar	202041036035/dated 04.09.2020	Multi-layered Graphene from Malus Domestica (Apple) Peel	2020
5	Dr. A. M. Shanmugaraj Dr. Sung Hun Ryu Dr.S. Raghu, Dr. RA. Kalaivani, Dr. G. S. Sundari Dr. K. T. Kumar K Dr. M. J. K. Reddy	202041036037/dated 04.09.2020	Graphene-Siloxene Based Composite Anodes for Lithium-Ion Batteries	2020

8.0	Collaboration with other organization and major thrust areas of research
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CEAF initiate joint collaborative research with various academic institutions in India/abroad either by submitting joint research proposals or by sharing research ideas with some successful research outcomes. The list of academic institutions, which are associated with CEAF includes

- (i) University of Madras, Chennai (Joint research project)
- (ii) National Institute of Technology, Surathkal (Joint research project)
- (iii) Indian Institute of Technology, Guwahati (Joint research project)
- (iv) Central University, Pondicherry (Joint research project)
- (v) Holon Institute of Technology, Israel (Joint research project)
- (vi) Kyunpook National University, South Korea

Thrust Area's of Research

The research objectives of “Centre for Energy and Alternative Fuels” aims to develop energy systems meeting the future energy demands. The present research activities of the CEAF can be group into the following areas.

Energy Harvesting and Storage



Other Research Areas

- (i) Electrochemical Sensors
- (ii) Thermoset Composite Materials
- (iii) Thermoelectric Materials

Some of the ongoing research activities include

- ✓ Waste tire carbon based anode materials for energy storage applications
- ✓ Carbon dots – Potential electrode for energy conversion and storage

- ✓ Metal organic frameworks based structurally engineered cathode materials
- ✓ Anode free batteries
- ✓ Metal dichalcogenides based electrocatalyst for controlled polysulfide dissolution in Li-S batteries
- ✓ Graphene-CNT framework based single atom catalyst for energy storage applications
- ✓ Engineered SiO anode for lithium-ion batteries
- ✓ Synthesis of self-healing polymeric binders for energy storage applications
- ✓ Controlling dendrite growth using engineered electrolyte layers
- ✓ Electrochemical performances of anodes with induced electric effect.
- ✓ Borophane based composite anodes for energy storage applications
- ✓ Phosphorene based anodes for energy storage applications.

9.0	Consultancy and MOU details
	In addition to sponsored projects, CEAF has signed MOU with various companies and obtained consultancy projects for the development of some products relevant to the market standards. The list of MOU's signed in last 5 years as well as the grants received from the companies are included in the following tables.

List of ongoing consultancy projects

S. No	Title of the consultancy project	Name of Principal Investigator	Name of the funding agency	Total grant sanctioned (Rupees)	Year in which started
1.	Development of laboratory made creamy liqueur from dairy milk	Dr. RA. Kalaiyani Dr. A. M. Shanmugharaj	Lux flavors, Chennai	3,00,000	2021
2.	Development of laboratory made creamy liqueur from milk powder	Dr. RA. Kalaiyani Dr. A. M. Shanmugharaj	Lux flavors, Chennai	3,00,000	2021
3.	Preparation of size controlled silver nanoparticles	Dr. RA. Kalaiyani Dr. A. M. Shanmugharaj	ECA Trade, Malaysia	7,00,000	2021

S. No	Name of the organization/Institution/Industry with whom MOU signed	Year of Signing MOU	Duration of MOU	List the activities under each MOU yearwise
1.	LUX Flavors, Chennai	2020	Three years	Developing laboratory made creamy liqueur

2.	ECA Trade, Malaysia	2021	Three years	Development of size controlled silver nanoparticles
3.	Regentech, Singapore	2021 (under process)	Three years	Exploring the application of carbon nanotube in energy applications

10.0	Training, workshop, conference and seminar		
	International Virtual Conference on "Advanced Nano Materials and their Applications" (ICANTA 2021) during 24 th and 25 th March 2021.		March 24-25 th 2021
	National Conference on Functional Materials and Its Applications (NCFMA 2018)		February 28 th & March 1 st , 2018
	International Conference on Emerging Trends in Nanoworld (ICETN 2017)		27 th & 28 th Feb 2017

11.0	New Product Development		
	<ul style="list-style-type: none"> ○ Graphene-like carbon materials from hemp fibers ○ Waste tire derived turbostratic carbon for energy storage applications ○ NMC based cathode materials for energy storage applications ○ Soft carbon materials with graphene like features from Medical waste plastics ○ Novel self-healing polymeric binders for lithium-ion batteries ○ Conceptual model on the development of anode free batteries 		

12.0	Any other achievements		
	<ul style="list-style-type: none"> ❖ Received best paper/poster awards by the doctoral scholars in various national/international conferences. ❖ Benchtop effluent treatment method 		

S.No	Name of the Event	Title of the Event	Date	Proof Link
1	FDP	Six Day Virtual Faculty Development Program on Emerging Materials for Next-Generation Energy Storage Devices (EMGES 2026)	01.04.2026 to 07.04.2026	
2	IIC Guest Lecture	Cultivating Young Minds for a Startup Future	30.03.2026	
3	Guest Lecture	Powering a Sustainable Future	25.03.2026	
4	Workshop	Ignite Your Ambition: From Campus to Government Officers	25.03.2026	
5	International Conference	3 rd International Conference on Emerging Nanomaterials in Biological, Chemical and Engineering applications	12.03.2026 to 13.03.2026	
6	Workshop	One Day Workshop on “Electrochemical Energy Storage Systems: Fundamentals and Applications of Rechargeable Batteries and Supercapacitors	04.03.2026	
7	National Seminar (Online)	Sustainable Water Pollution Remediation using Iron Oxide–Based Photocatalysis in Support of SDG 6 (Clean Water and Sanitation)	28.02.2026	
8	Special Lecture (Chem Enviro Club)	Sustainable Waste Management on Campus	25.02.2026	
9	FDP	Six Day Virtual Faculty Development Program on Advanced Functional Materials for Clean Energy and Green Environment (AFMEE 2026)	13.02.2026 to 17.02.2026	
10	Guest Lecture	India AI Impact Pre – Summit 2026 Guest Lecture on "SDG 11 - AI Awareness and Readiness - Preparing Academia for an Intelligent Future	10.02.2026	
11	Guest Lecture	SDG 12 Responsible Consumption and Production: Unraveling the Molecular World : Insights from FTIR spectroscopy"	04.02.2026	
12	Guest Lecture	Lead-Free Perovskite Materials: Overcoming Barriers to Reliable Clean Energy - Under SDG Goal 7	30.01.2026	
13	IIC Guest Lecture	Bridging Academia, Industry and Entrepreneurship: The NexIVD Model	29.01.2026	

14	FDP	Six Day National Level Virtual Faculty Development Program on “Emerging Trends in Advanced Materials for Energy and Environmental Applications	27.10.2025 to 01.11.2025	
15	Awareness Program	Clean Water and Environment	24.10.2025	
16	FDP	Six Day (Second Series) Virtual Faculty Development Program on “Interdisciplinary Approaches in Green Chemistry, Biotechnology and Environmental Engineering (GCBE 2025)	22.09.2025 to 27.09.2025	
17	Guest Lecture	Silicon for Semiconductor Applications	09.09.2025	
18	IIC Invited Lecture	IPR Protection and Management for Startups & Researchers	30.07.2025	
19	Invited Lecture	Recycling of End of Life solar panels and Recovery of valuable components	25.07.2025	
20	Invited Lecture	Evaluating the Emerging Contaminants In Ground Water, Identifying the Future Prospects	22.04.2025	
21	Awareness Program	Skincare and wellness	09.04.2025	
22	International Conference	2nd International Conference on Emerging Nanomaterials in Biological, Chemical and Engineering applications	13.03.2025 to 14.03.2025	
23	Awareness Program on Industry Exposure	Exposure to Industry (Novel Drug delivery systems and drug development)	11.03.2025	
24	Awareness Program	Clean Water and Sanitation at Edapalayam Village	27.01.2025	
25	FDP	Six-Day Faculty Development Programme on "Prospective Research on Sustainable Development: Recent Advances and Future Prospects	19.08.2024 to 24.08.2024	
26	International Conference	Advanced Innovation and Research Challenges in Science and Technology	01.03.2023 to 03.03.2023	

**ASSISTIVE TECHNOLOGY AND FACILITIES FOR PERSONS WITH
DISABILITIES (DIVYANGJAN) ACCESSIBLE WEBSITE, SCREEN-
READING SOFTWARE, MECHANIZED EQUIPMENT**



VELS



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)
PALLAVARAM, THALAMBUR, PERIYAPALAYAM, THIRUVANMIYUR



4. Assistive Technology and Facilities for Persons with disabilities (*Divyangjan*) accessible website, screen-reading software, mechanized equipment:

Assistive technology and accessible facilities are crucial for ensuring that persons with disabilities can participate fully in society. VISTAS represent a range of assistive technology (Equal Web) and facilities designed to promote accessibility and inclusivity for persons with disabilities in various aspects of daily life.

Equal Web is a web accessibility solution that aims to make websites accessible to people with disabilities. It offers a range of tools and features to ensure compliance with accessibility standards such as the Web Content Accessibility Guidelines (WCAG). Equal Web's services typically include features like screen reader optimization, keyboard navigation, color and contrast adjustments, and more, making websites usable for individuals with various disabilities such as visual impairment, motor disabilities, cognitive impairments, and more.

ASSISTIVE WEBSITE TECHNOLOGY (Equal Web)

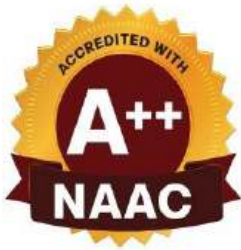
The screenshot displays the Equal Web accessibility interface. On the left, there is a sidebar with an 'Accessibility' menu. Below it, a list of disabilities is shown with 'ON' and 'OFF' toggle switches: Blindness, Motor Skills Disorders, Color Blindness, Visually Impaired, Epilepsy, ADHD, Learning, Elder, and Dyslexia. Underneath, there is a 'Navigation Adjustment' section with icons for 'Screen Reader Adjustment', 'Keyboard Navigation', and 'Smart Navigation'. At the bottom of the sidebar, there are links for 'Turn Off', 'Accessibility Statement', and 'Send Feedback', along with the text 'Powered by EqualWeb'. The main content area shows the 'Login to EqualWeb' page. It includes a 'Sign up' link for users without an account, social media login options for Google, Microsoft, and LinkedIn, and a 'OR' separator. Below this are input fields for 'Your email' and 'Your password', a 'Forgot password? Click here' link, a CAPTCHA 'I'm not a robot' checkbox, and a blue 'Login' button.

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Email : vels@vistas.ac.in **Website :** www.vistas.ac.in

Admin. Office : 521/2, Anna Salai, Nandanam, Chennai - 600 035. **Tele Fax :** 2431 5541 / 2431 5542



VELS

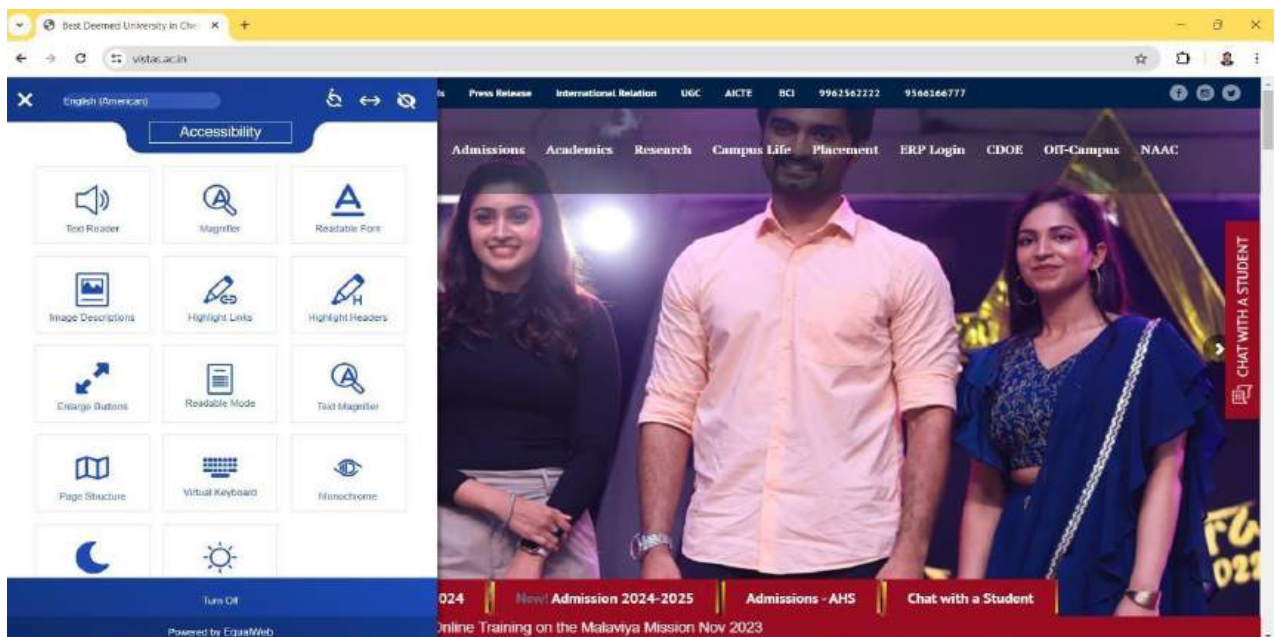


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ASSISTIVE Equal Web FEATURES IN VISTAS WEBSITE



ASSISTIVE Equal Web FEATURES IN VISTAS WEBSITE



Campus : Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600 117. INDIA.
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Email : vels@vistas.ac.in **Website :** www.vistas.ac.in
Admin. Office : 521/2, Anna Salai, Nandanam, Chennai - 600 035. **Tele Fax :** 2431 5541 / 2431 5542

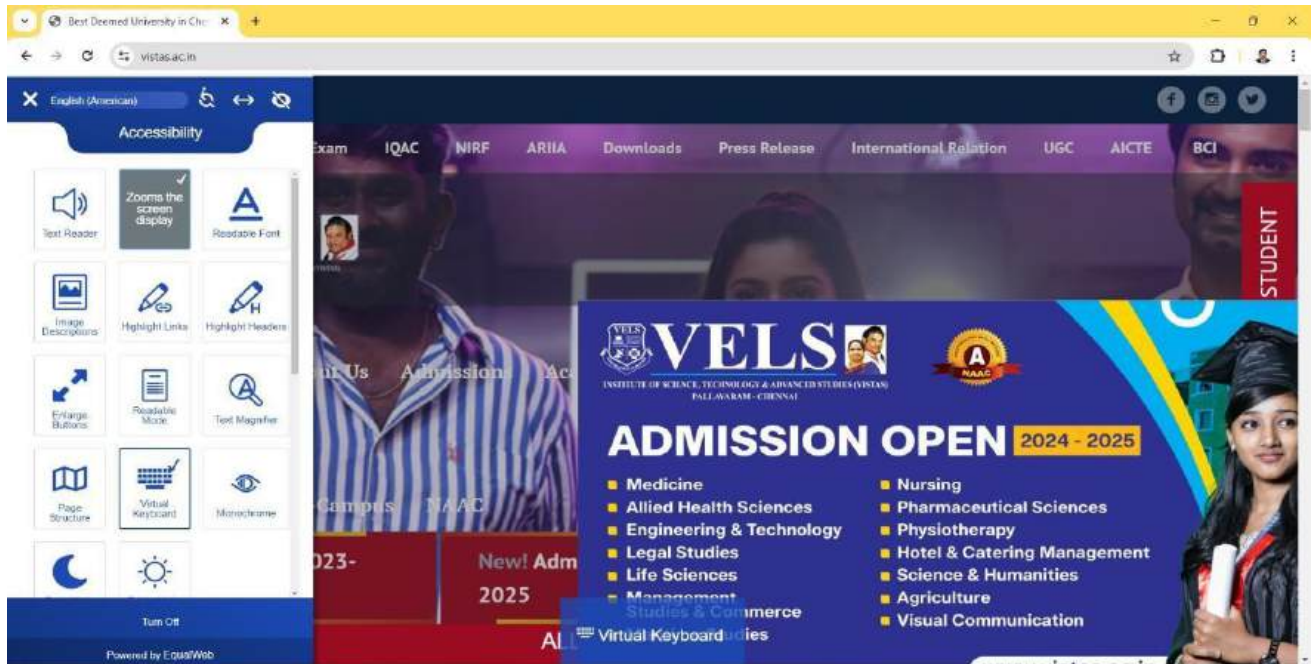


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SCREEN DISPLAY ZOOMING FACILITY



READABLE FONT FACILITY



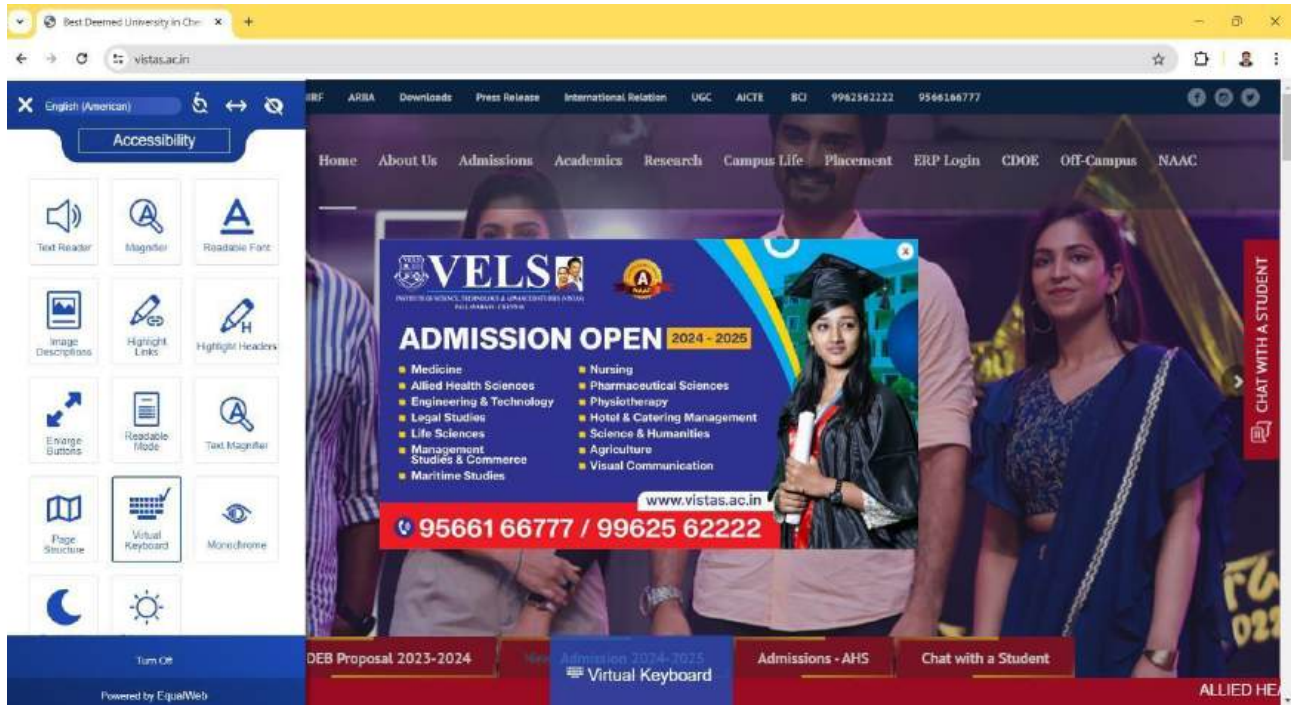


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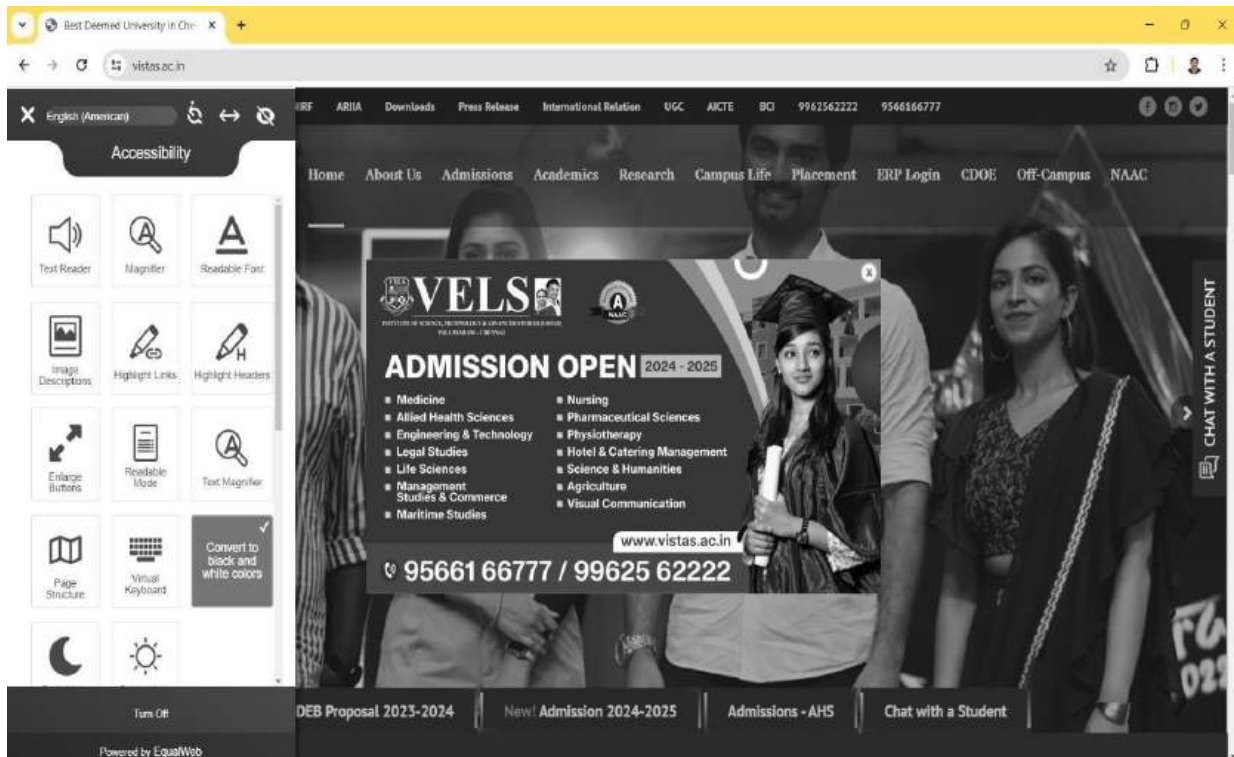


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VIRTUAL KEYBOARD FACILITY



MONOCHROME FACILITY FOR COLOUR BLIND



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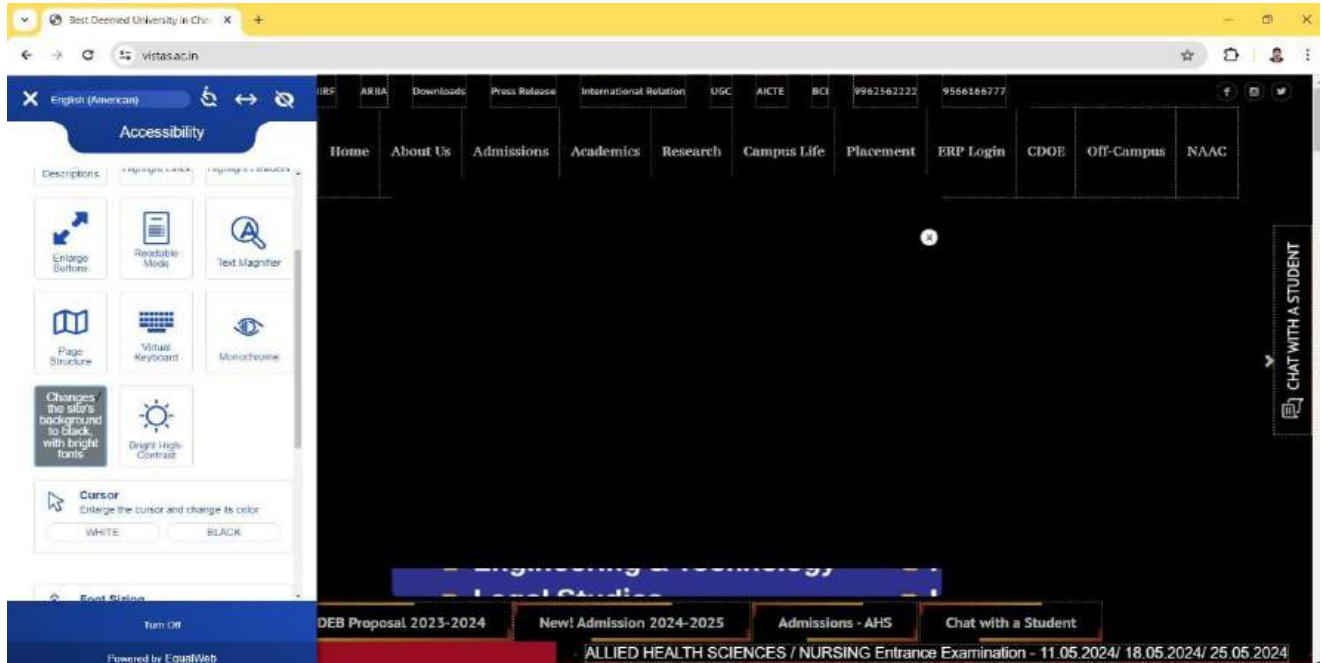
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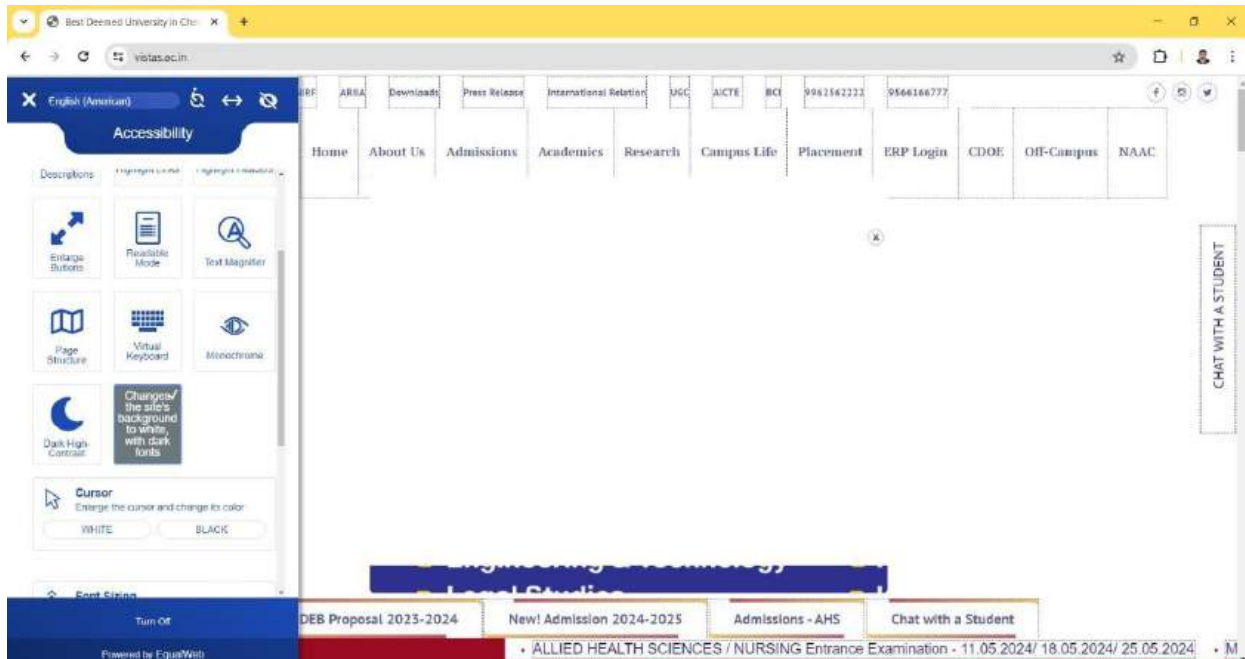
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DARK HIGH CONTRAST MODE



BRIGHT HIGH CONTRAST MODE





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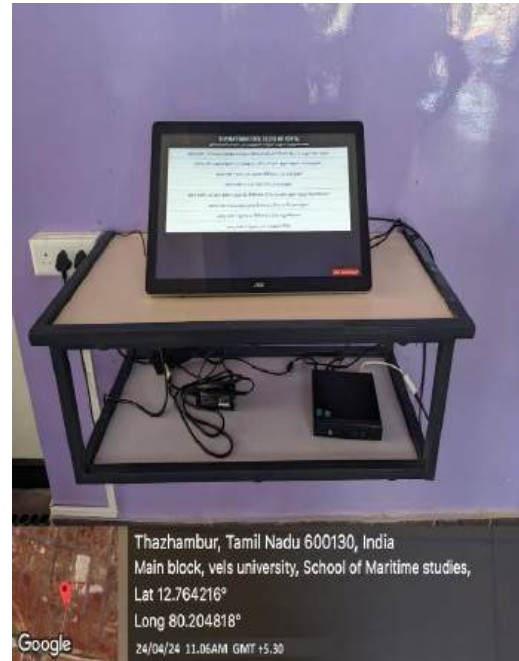
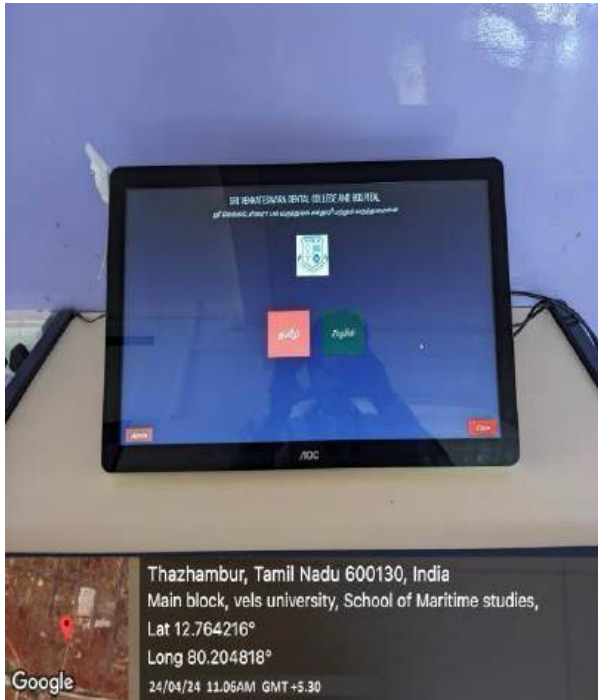
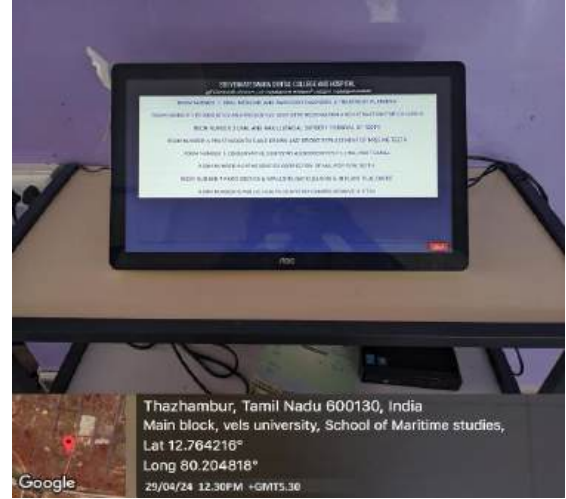
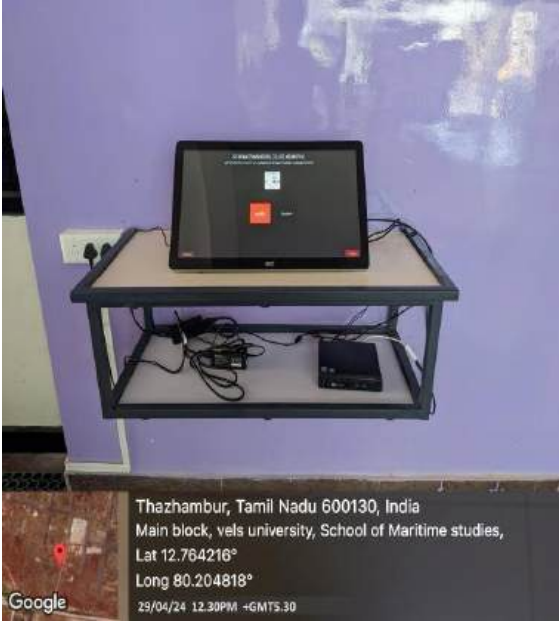


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SCREEN READING: VISTAS - UNGAL NANBAN



(உங்கள் நண்பன் செயலி)





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**BUILT ENVIRONMENT WITH RAMPS/LIFTS
FOR EASY ACCESS TO CLASSROOMS**



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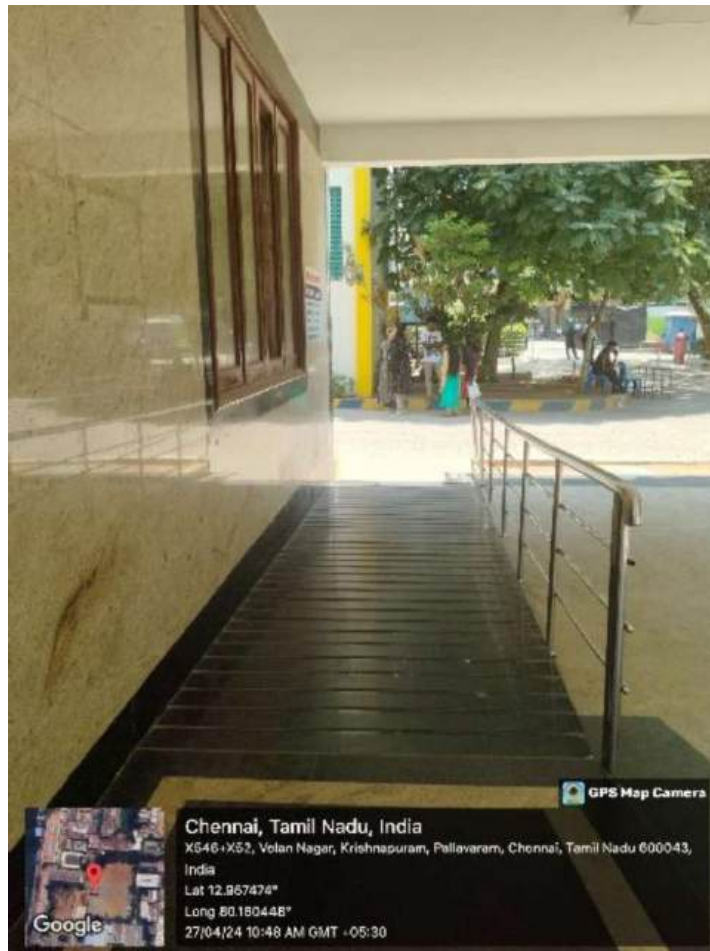


7.1.7. DISABLED-FRIENDLY, BARRIER-FREE ENVIRONMENT FACILITIES AVAILABLE IN VISTAS

1. Built environment with ramps/lifts for easy access to classrooms:

VISTAS incorporated ramps/lift elements into the design and construction of the built environment, to create a space that is inclusive and accessible to all individuals, regardless of their mobility or physical abilities.

RAMPS BUILT-IN FACILITIES AVAILABLE IN VISTAS





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WHEEL CHAIR ASSISTANCE THROUGH RAMP



WHEEL CHAIR ASSISTANCE THROUGH RAMP





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RAMP FACILITIES AVAILABLE IN VISTAS



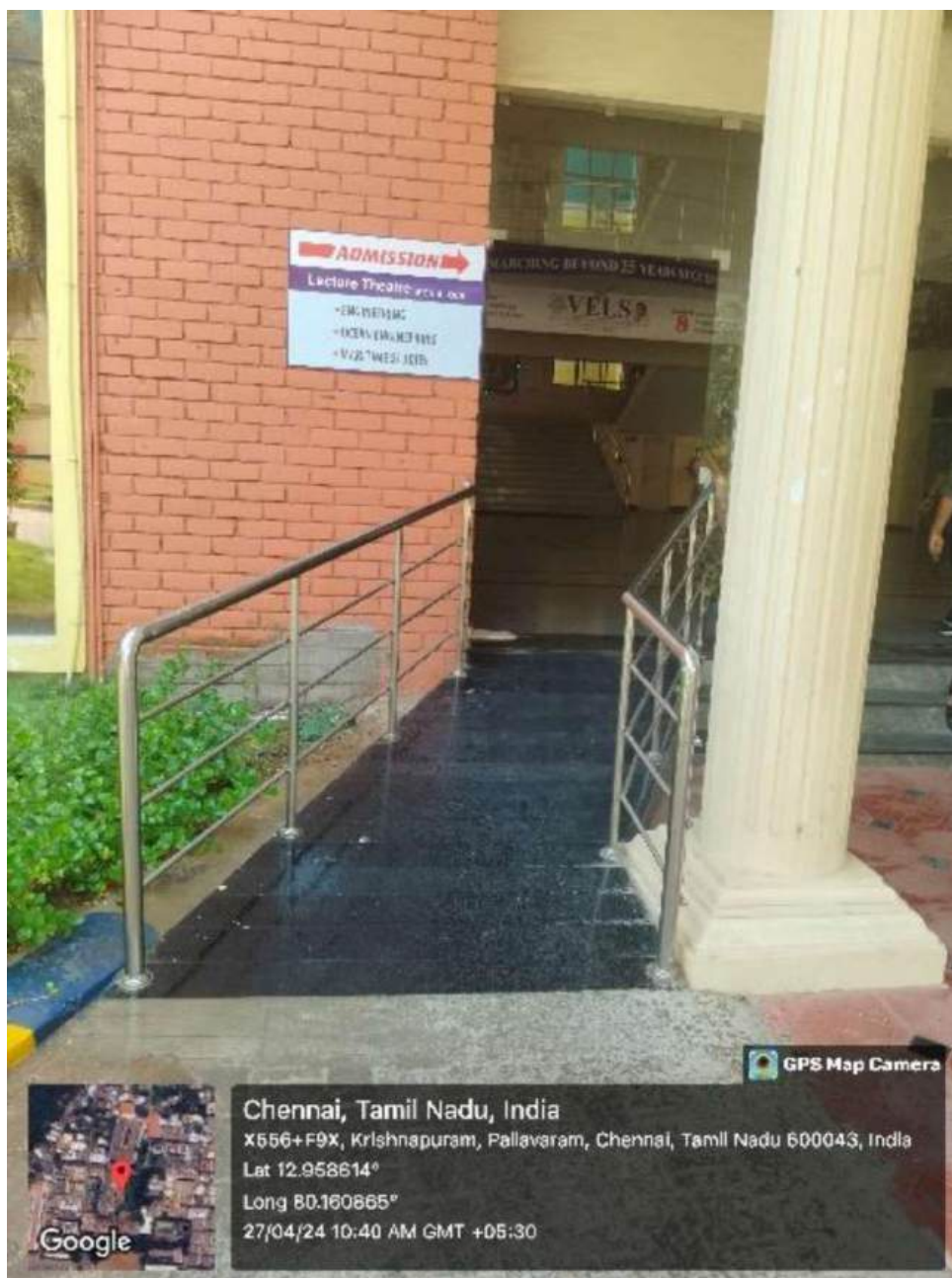


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RAMP FACILITIES AVAILABLE IN VISTAS





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WHEEL CHAIR ASSISTANCE AVAILABLE



Bandikavanoor, Tamil Nadu, India
Unnamed Road, Bandikavanoor, Tamil Nadu 601101, India
Lat 13.26777°
Long 80.122404°
10/05/24 09:18 AM GMT +05:30



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PATIENT ASSISTED USING WHEEL CHAIR



GPS Map Camera



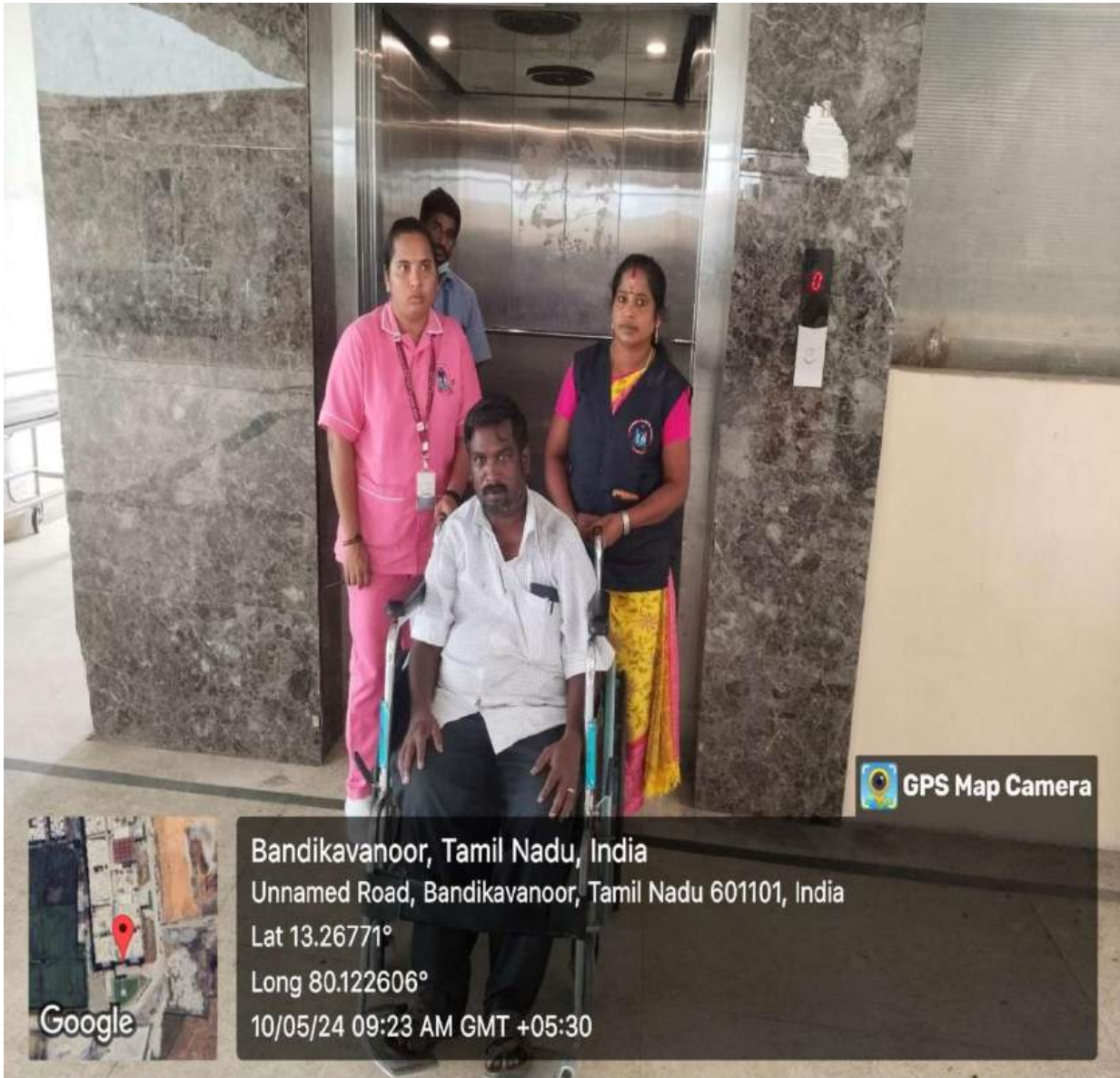
Bandikavanoor, Tamil Nadu, India
Unnamed Road, Bandikavanoor, Tamil Nadu 601101, India
Lat 13.267971°
Long 80.12258°
10/05/24 10:25 AM GMT +05:30



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PATIENT ASSISTED USING WHEEL CHAIR

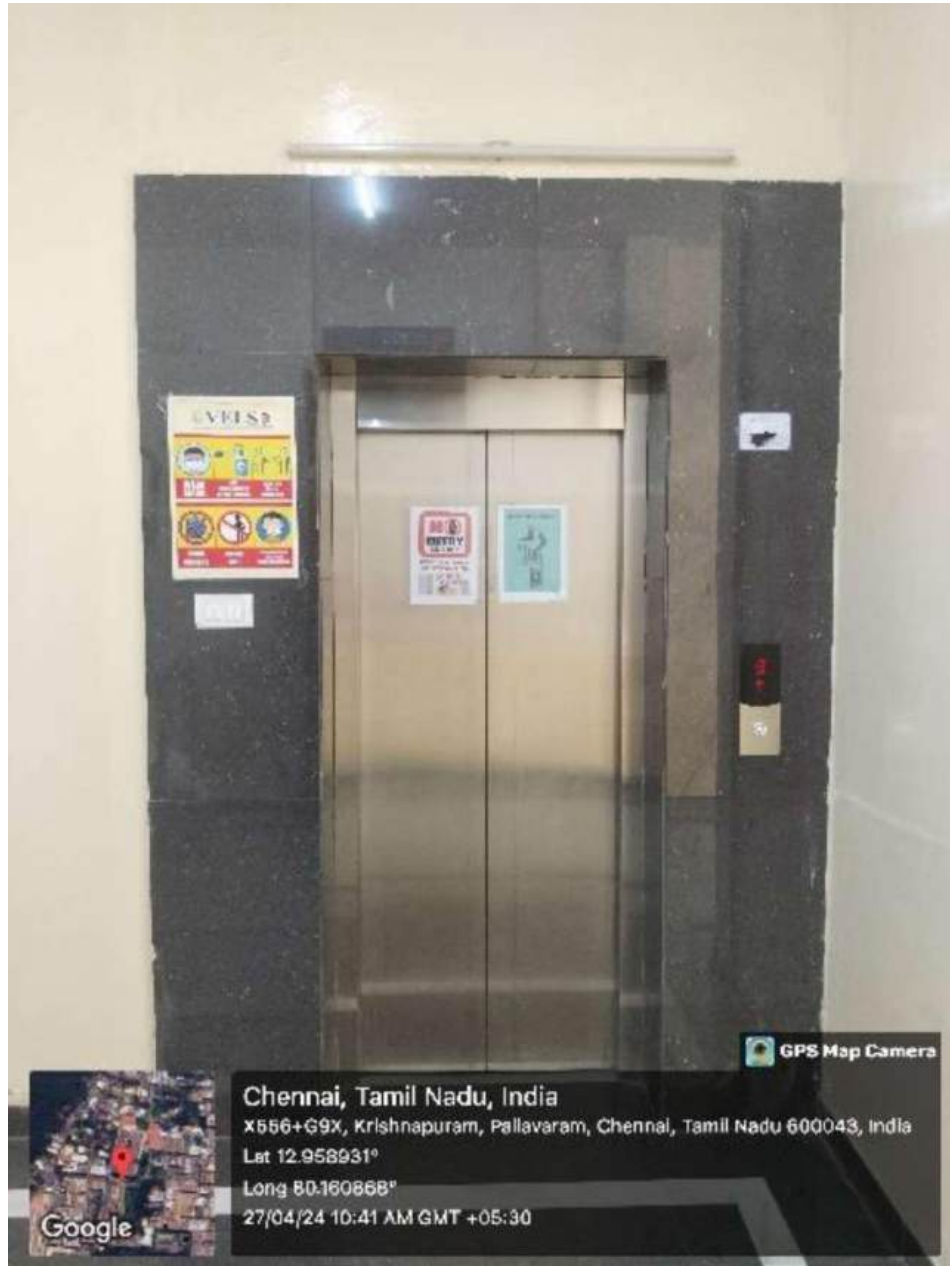




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LIFT FACILITY IN VISTAS



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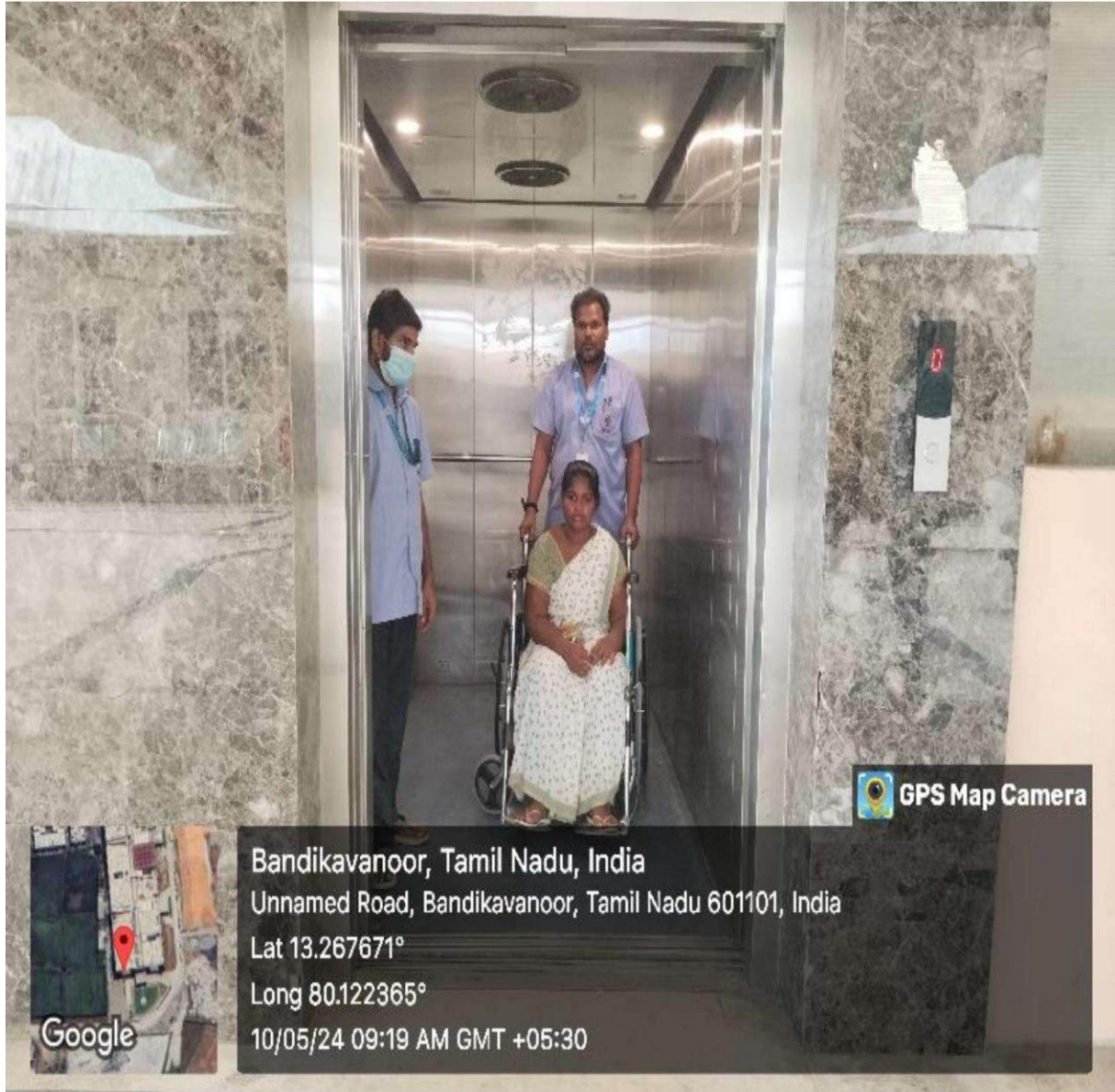
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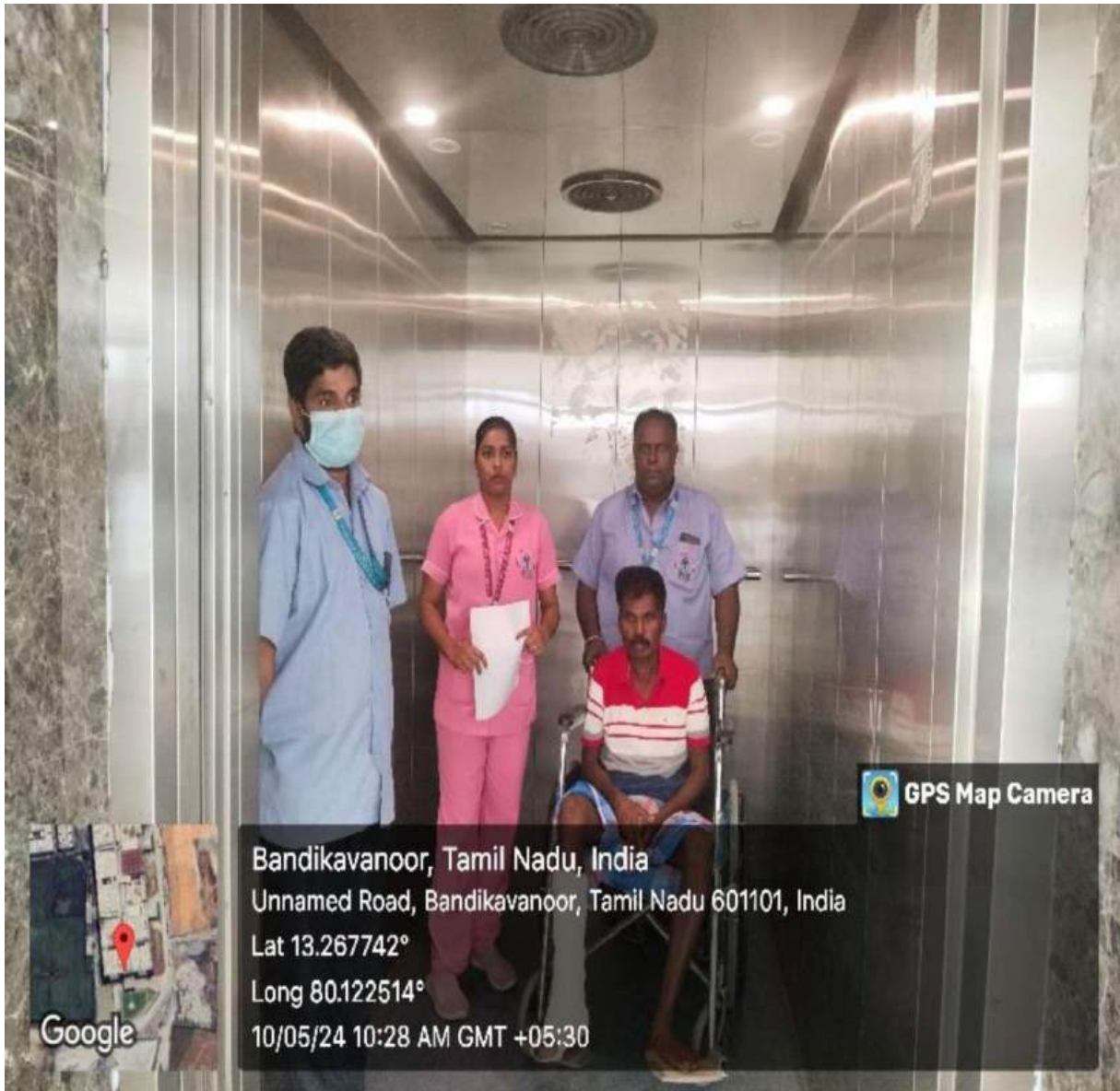


PATIENT USING LIFT





PATIENT TRANSPORTED USING THE LIFT FACILITIES





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LIFT IN VMCH



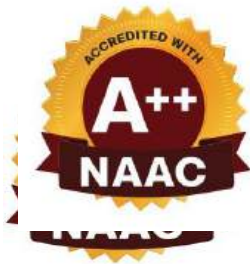
VISTAS
VNC lift
11.04.2024 11:26
13.26806, 80.12247 (±52m)
Altitude: -51m
Unnamed Road, Bandikavanoor 601101



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DISABLED-FRIENDLY WASHROOMS



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2. Disabled-friendly washrooms:

Disabled-friendly washrooms available in VISTAS for thoughtful consideration of accessibility features to ensure they are usable and comfortable for individuals with disabilities.

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ACCESSIBLE TOILETS IN VISTAS





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DIVYANGIAN FACILITIES IN ACCESSIBLE TOILETS



Chennai, Tamil Nadu, India

X546+J6G, Velan Nagar, Krishnapuram, Pallavaram, Chennai, Tamil Nadu

600043, India

Lat 12.956663°

Long 80.160669°

04/04/24 11:34 AM GMT +5.30



Chennai, Tamil Nadu, India

X546+J4Q, Velan Nagar, Krishnapuram, Pallavaram, Chennai, Tamil Nadu 600043, India

Lat 12.956321°

Long 80.160389°

07/05/24 09:28 AM GMT +05:30

Campus : Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600 117. INDIA.

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