SNIoE

Environment
Health
Safety
Management System

Index

Infrastructure Overview [Engineering, Soft Service & Built-up Area]:

- 300 Acre Land with enclosed periphery.
- 30 lacs sq.ft. of constructed facilitates.
- More area of 10 lacs sq.ft. area is under construction

Grid Energy Setup :

- 33KV Grid power supply from PVVNL.
- Sanctioned Electrical load is 6027KW.

Back Up Power

- Standby power backup arrangement is 9500 KVA
- Diesel storage capacity of 45 KL to support power backup for 72 Hrs.

UPS Power 2050 Kva UPS power backup to support IT .

Renewable Energy

- 430KW of Solar power plant 7% of our energy uses.

Recycling & Treatment Plants

- Recycling water
- STP with 500 KLD capacity
- Recycling food wastage Organic compost plant of 200 Kg/Day capacity.
- Raw water treatment Plan with 800 KLD capacity through various method, like : WTP, RO etc.
- Rain Water Harvesting to artificial lake

HVAC Arrangements

- centralized Air-conditioning system for A,B C E&R Block
- Centralized Chiller plant of capacity 3000 TR.
- 2100 HP VRF and 600 TR of Split unit, Inclusive of Hostels.

Operations Details:

- Employee Transportation
- Spot Transportation
- Travel Desk
- Security and Safety
- Repairs & Maintenance
- Housekeeping
- Wellness Centre
- Sports and Games
- Horticulture & Wildlife
- Dining Halls
- Campus Housing

EHS (Environmental Health & Safety)

- It is a system that studies and implements the practical aspects of protecting the Environment and maintaining Health and Safety at occupation.

- Regulatory requirements play an important role and EHS Management must identify and understand relevant EHS regulations, the implications so that organizations can implement suitable measures.

"Under the guidelines of ISO 14001:2015 & ISO 45001:2018, Integrated Environment, Health & Safety Management System embracing all Academic, Research, Extra curriculum & Support facilities including Residential facilities and services at SNIoE has been established and accreditation granted in January 2019"
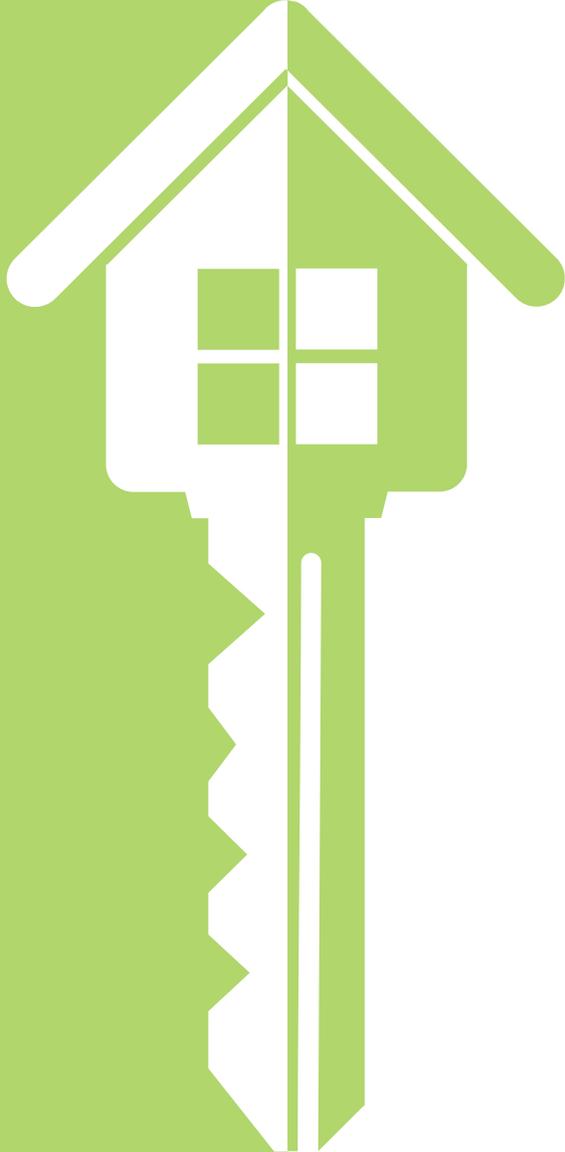
EHS Policy

Environment, Health and Safety Policy

Shiv Nadar Institution of Eminence Deemed to be University (SNIoE) is committed to maintaining, and wherever possible, improving the quality of its environment, both for the people who live and work in the University and for the wider community. **The Environment, Health and Safety (EHS) Policy** of SNIoE seeks to make the most effective and efficient use of all University resources, to minimize any adverse environmental impact, to comply with relevant legislations, and it encourages all members of the University community to develop a sustainable approach to their work and lifestyle.

SNIoE recognizes people as its most important asset, and is committed to providing a safe and healthy working conditions for those studying, teaching, conducting research, working and visiting the SNIoE Campus.

Scope:

The Environment, Health and Safety Policy applies at each stage of development of academics and extracurricular activities as well as services, from research through to full-scale operation, in all its domains. It applies to every stage in the life cycle of the process and services i.e. a cradle-to-grave assessment.

Implementation

A. In implementing the Environment, Health and Safety Policy, SNIoE will
- Use standards of Environment, Health and Safety, deploy resources, review processes and controls, to eliminate hazards and reduce adverse impact to ecosystem and biodiversity.
- Work in cooperation with members of the fraternity, government agencies, relevant environmental bodies, suppliers, service providers and interested parties to promote high standards in environmental care, continual improvement in performance of services and operations.
- Ensure that all applicable legal & other compliance obligations are fulfilled.
- Promote responsibly and disseminate information on EHS performance periodically.

B. SNIoE undertakes
- To appoint and empower a member of SNIoE to oversee all environmental matters and to manage relevant communication both internally and externally.
- To analyze the University's environmental footprint and initiate changes as necessary to improve the University's environmental performance.
- To comply with all local and national environmental laws and regulations.
- To adopt the best practices in accordance with guidelines produced by SNIoE or an appropriate body.
- To encourage consultation and participation of employees, students and representatives towards enhancement and awareness of the EHS management system.

- To undergo periodic audits and review to proactively determine the strength of the established processes and system and encourage bringing in best practices and technology for efficient use of resources.

C. The Policy is to be implemented at the operating level. The overall responsibility for implementation and maintaining standards of the Environment, Health and Safety Policy rests with the Head of Administration and further designated Management Representative (MR). S/He will
- Take steps in protecting the environment through continuous improvement in the environment impact of SNIoE operations.
- Meet or exceed the requirement of legislation.
- Increase environmental awareness by appropriate training of user groups.
- Ensure that in the implementation of the Policy, SNIoE is able to call upon expertise available from suitable specialists within or outside the University campus.

All individuals at SNIoE have responsibility for the implementation of the Policy in areas of their control. They are to ensure that the activities conducted are as per appropriate procedures, aligned with the objectives of the SNIoE Environment, Health and Safety Policy.

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Ver. No.: 1.2

Effective Date: 2.9.2022

Dr Ananya Mukherjee
Vice Chancellor

Core Group Structure :

Top Management

Management Representative (along with MR Coordinator)

- **School Of Engineering**
  - Chemical
  - Computer Science
  - Mechanical
  - Electrical
  - Civil
- **School Of Natural Science**
  - Physics
  - Chemistry
  - Life sciences
- **School Of Humanities and Social Sciences**
  - Design
  - Arts
  - Communication
  - Economics
- **School Of Management & Entrepreneurship**
- **Support Function**
  - Admin
  - IT
  - HR
  - Project
  - Purchase
  - CDC, Admission, Registrar and Finance.
  - Infra Project
- **Dean- Student Affairs**
  - Hostel
  - Sports
- **Others**
  - Cafeteria
  - Wellness Centre
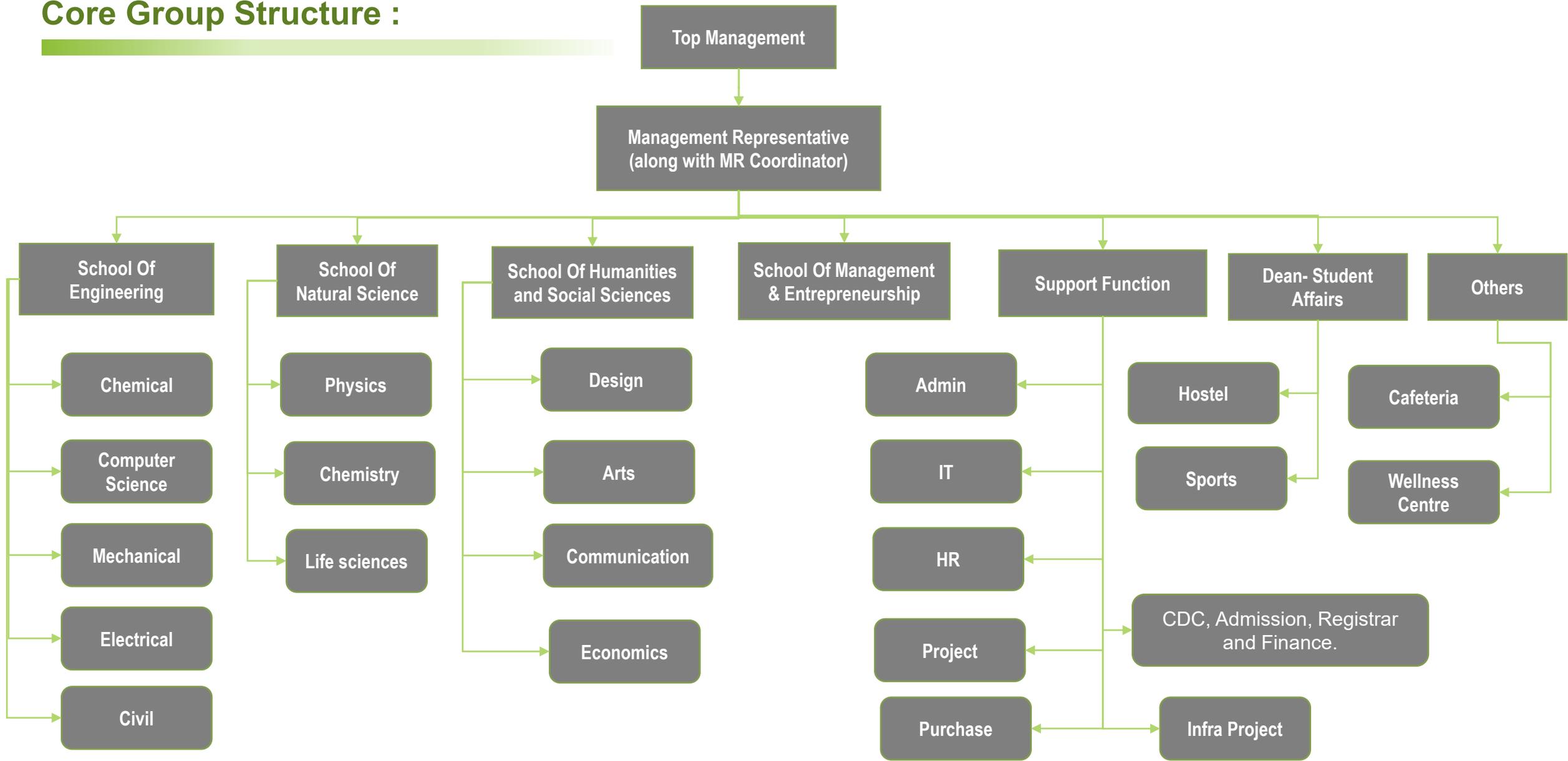
There are more than 150 Labs taking part in EHSMS

Key EHS Risk :

Law & Regulations :
Health and safety teams are closely monitored, this is predominantly due to the nature of the job. This is especially true regarding the different laws and regulations that these teams must be aware of and adhere to in order to keep employees & students safe and compliant.

Occupational Hazards :
Professional team is responsible for identifying potential safety hazards and conducting regular workplace inspections to help prevent incidents and injuries.

Natural Disasters :
Typically more concerned with risks that are a result of the actions of people, health and safety teams should be aware of unpredictable This includes, but is not limited to, earthquakes, hurricanes, floods, fires, and even explosions.

Employee Health & Wellness :
A health condition or disorder that is caused by your work environment or activities related to your work." This may include biological bacteria, exposure to chemicals, ergonomic issues, extreme temperatures or noises, and even psychosocial hazards like stress, harassment, and lack of recognition.

Environmental Impact :
One simple way to minimize environmental damage is to adopt the use of low carbon technologies and other clean-tech initiatives.

Protect the worker with Personal Protective Equipment — PPE — Least effective

Change the way people work — Administrative Controls

Isolate people from the hazard — Engineering Controls

Replace the hazard — Substitution

Physically remove the hazard — Elimination — Most effective

Hierarchy of Controls

HIGH   MEDIUM   LOW
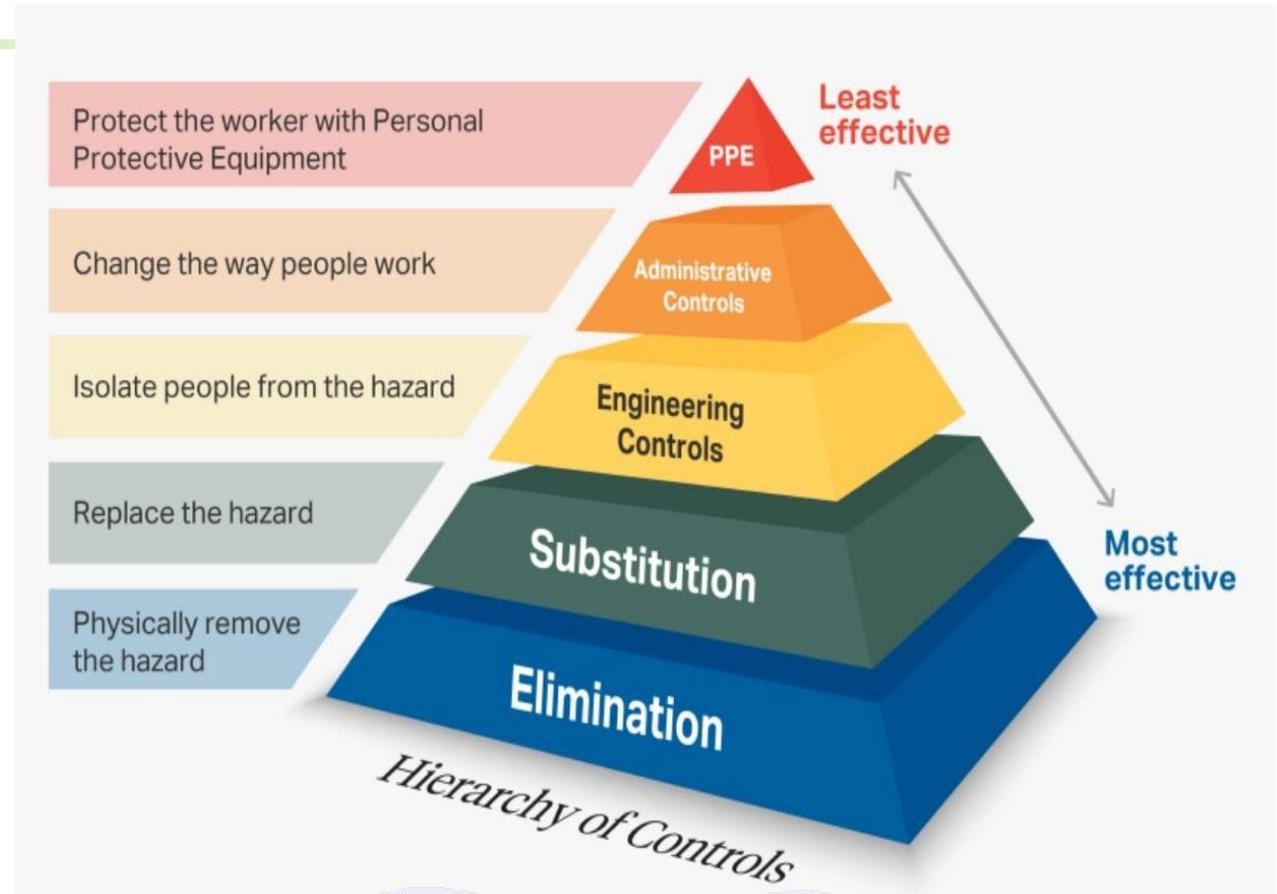
RISK

Green Initiative & Sustainable Solutions – Risk Mitigation :

Renewal Energy

- Removing high power equipment with LED lighting , BLDC fan etc.
- Increased awareness & Checks, Posters displayed, Save Energy stickers etc.
- 430 KW Solar power plant

Water Conservation

- Monitoring and control on water wastage Metering,
- Awareness on water conservation
- Change of Taps to reduce the water flow
- Rain Water Harvesting
- Waste water Treatment Plant (STP)

Paper Uses Conservation

- 53 % Decrease in paper consumption (A4 sheets)
- 41%, Decrease in usage of Toilet Rolls
- 48% decrease in usage of Tissue paper
- 25% decrease in paper Cup
- Food Packaging and Serving on Biodegradable Bagasse
- 87% increase in recycle of paper, wood and plastic waste
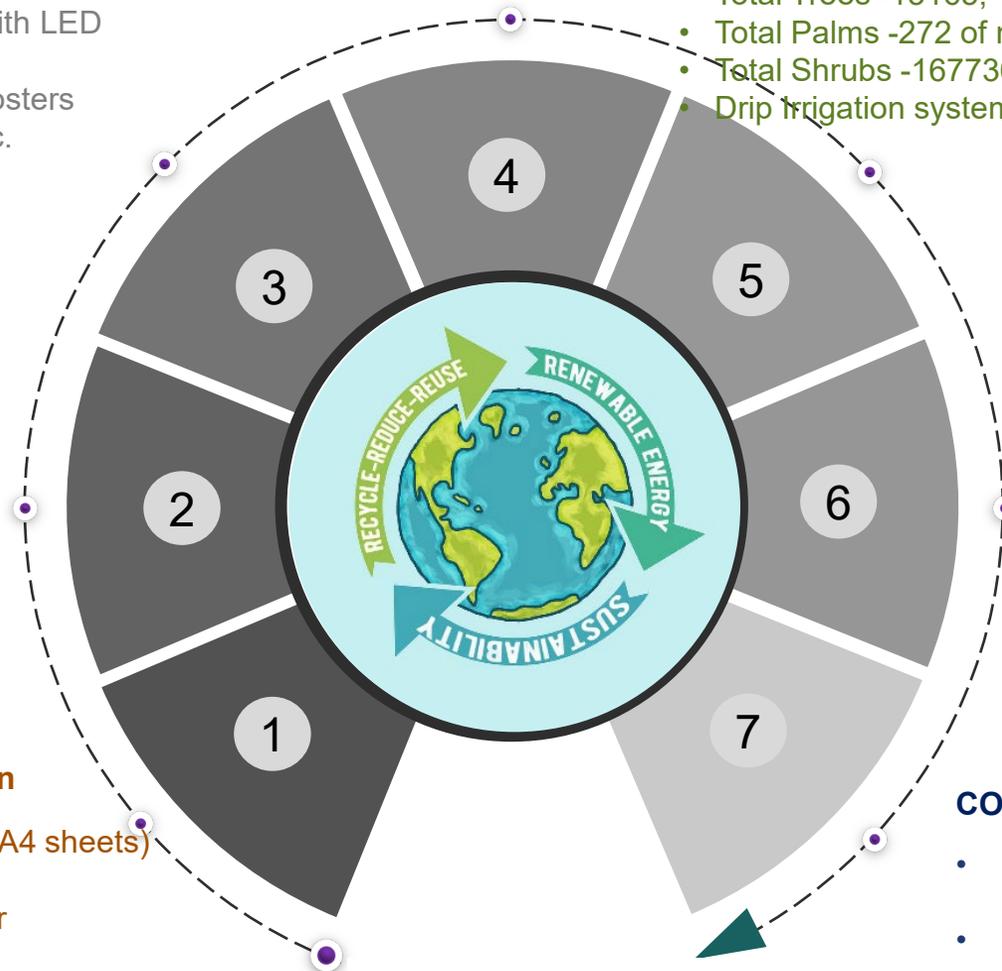
Tree Plantations

- Drive for plantation of more trees inside the campus area.
- Around 107.5 acres (38%) are the greenery area.
- Total Trees -13165,
- Total Palms -272 of more than 10 variety
- Total Shrubs -167736.
- Drip Irrigation system/Sprinkler system watering

Food Waste Control

- 45% decrease, due to increased awareness,
- poster display,
- student interactive sessions and training to Cafeteria Staff
- Install Organic Compost Plant of capacity 200 Kg inside the Campus

Revoke Plastic Uses

- Glass water bottles are provisioned in all conference rooms.
- Biodegradable disposables, food wrap etc.
- 64 % reduction in usage of water bottles in the events/meetings,
- 88% degrease in usage of food grade cling wrap

CO2 Reduction

- Reduction in Local Transport (SNU Controlled vehicles) by planning and controlled routing
- More Cycles in Campus, pooling in cars
- PNG in campus
- Switching to online meetings. Less travel
- 68% decrease in business travel
- Going in E-cart, Golf cart, Loader cart within the campus

Safety & Security Overview [Wellness, Transport & Security]:

Health & Wellness

- Health and Fitness activities are organized through out the year
- Fully equipped Sports Centre
- Holistic approach through Yoga, Meditation sessions and small Capsule courses.
- Students Insurance.
- Campus Infirmary–Wellness Centre.
- Resident Physicians, Dentist, Physiotherapist, Councilors, Nursing Staff.
- Infirmary is equipped to provide pre-hospital Management.
- Two Ambulance available at the campus all the time.
- Campus Pharmacy
- Nearby multispecialty hospitals like Jaypee Hospital, Kailash, Yatharth etc.
- Student's Insurance

Physical Security

- Dynamic deployment of Physical Security. Risk-Gap assessment.
- Training to handle immediate fire and medical emergencies
- Training on behavioural aspect to handle visitor's facilitation and management.
- Rotation of guards to various posts. Regular Patrolling at perimeter.
- Access Control- Biometric, RFID
- Work permit process
- CCTV Surveillance
- All entry/exit of material is through security stamping.
- Transport escort guards and Pilot Vehicles as per assessment.
- Parking management for visitors.
- Guards' posts are equipped with telephones and walky-talky.
- Emergency evacuation and fire fighting training

House Keeping

- MSDS for Housekeeping and Pest Control Chemicals
- Food Safety FSSAI Compliances
- Detailed check list hygiene and food preparation.
- Sample Food preservation
- Training for Skill enhancement, safety and behavioral aspects.
- Student Food Council
- Deep Cleaning & Sanitization
- Pest Control Management, indoors and outdoors
- Overhead Tank cleaning , UV Treatment
- Water Testing at 67 points.
- Availability of First Aid Boxes
- Waste management
- PPE and compliance
- Advisory and information for wellbeing and safe guard

Transportation

- Authorized vendors. Drivers possessing valid Driving License, police verified.
- Vehicles are checked for their fitness
- After 8PM, escort guards to all female employees.
- Escort vehicles from Pari Chowk for any VIP / Guests.
- Vehicles to follow Eastern Periphery Road only
- Drivers are given regular briefing on driving skills/ behavioral aspects.
- All vehicles are fitted with GPS
- Passengers Do's and Don'ts
- No passenger can be taken enroute unless it is planned and mentioned in the trip sheet.

Carbon Footprint & Sequestration Summary:

Comparing the cumulative value of the Carbon Foot-print for all Scope 1, 2, & 3 together, there is a **30% reduction in the cumulative CFP as compared to the base year 2019-20.**

GHG Emissions	Scope 1	Scope 2	Scope 3
MT CO_2e (2018-19)	743	9668.4	**1,029**
MT CO_2e (2019-20)	738	10,649	**2,427**
MT CO_2e (2020-21)	497	6277	**1292**
MT CO_2e (2021-22)	**1219**	**7168**	**1753**

Total CFP
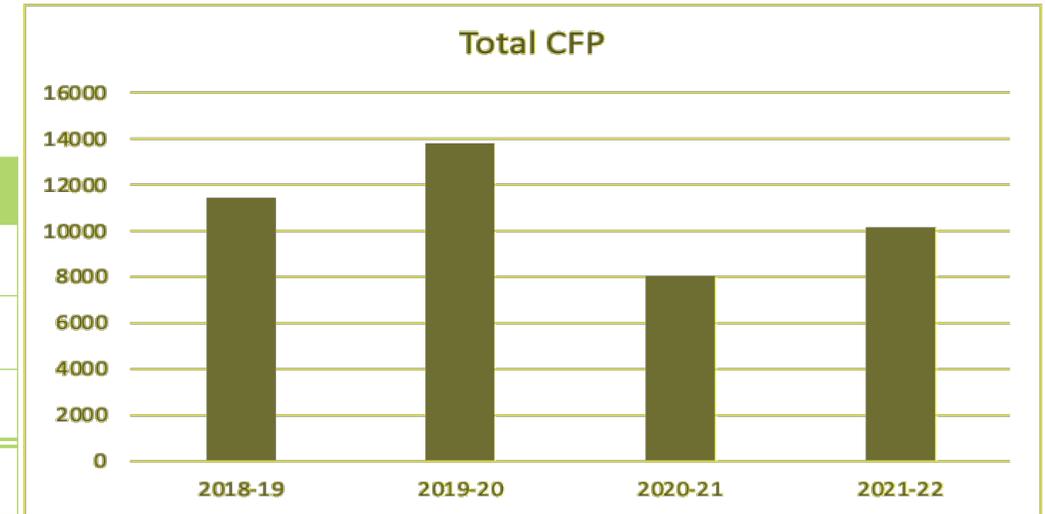
Annual Carbon sequestration Value (Year: 2021-2022)			
S. No.	Category	Total quantity of trees / shrubs / area considered respectively	Value (MTCO$_2$e)
1.	Annual Carbon equivalent sequestered in metric tonnes (Trees)	17,281	442.61
2.	Annual Carbon equivalent sequestered in metric tonnes (Shrubs)	1,10,704	509.6
3.	Total carbon equivalent sequestered by soil under different grass species in metric tonnes*	33.944 ha	502.26
4.	Total		1,454.47

- Carbon sequestration implies the transfer of atmospheric CO2 into other long-lived global pools including oceanic, biotic and geological strata to reduce the net rate of increase in atmospheric CO2.
- 17% of carbon footprint is footprint is compensated by the sequestered carbon due to the plantation & green coverage of Campus.

Key Benefits :

1 ➤ **Statutory and Regulatory Compliance**

2 ➤ **Prepared for emergencies , like :**
- Fire Emergencies
- Earthquake
- Epidemic (COVID-19,BCP) etc.

3 ➤ **Standardisation of Processes/ Record Keeping/ Monitoring & Control**

4 ➤ **Continual improvement**
➤ **Carbon Footprint Sequestration.**
➤ **THE World Impact Ranking. Participation in UNAI - SDG**

5 ➤ **Efficient use of resources. Like :**
Energy Conservation # Water conservation # Paper Saving
Food wastage reduction # Health and hygiene
Occupational Safety # Recycle

Compliance & Best Practices

- MSDS for Chemicals, ETP
- Food Safety FSSAI Compliances
- Labour Compliances for PF, ESI, POSH, Min Wages compliances.
- CTO, EC from Pollution Control Board
- Fire NOC and Fire safety best practices,
- Ground Water Testing and NOC
- Lift Compliances
- Indoor Air Quality Test
- Lux Level checks
- Noise Level Test
- Water testing
- Water storage tank cleaning
- Waste disposal, E Waste Record
- Biomedical Wastes compliance
- Safety through PPEs
- Implement LOTO for M&E activities
- Regular Deep Cleaning by steam Jet
- Hazardous Waste Management compliance
- IGBC accreditation
- Carbon Foot Printing
- Carbon Sequestration
- Occupational Safety measures.

Implementation Journey:

2019
- Adoption of University wide EHS Program.
- Documented EHS Policy and Framework

2020
- Implementation of EHS Management System
- Carbon Foot Print Measurement

2021
- Adopting Sustainability Development Programmed of UN SDG.
- Set up of Steering Committee for SDG

2022
- Sustainability Roadmap New Goal and objectives

- Taking membership of UNAI.
- Filing of First report and get the initial ranking on Global Platform.

2019
- Assessment of campus Resources
- Planning for Environment, Health and Safety Management System
- EHS Policy and Core committee
- Carbon Foot Printing 2018-19
- All Compliances
- Training and knowledge sharing with all stake holders

2020
- Carbon Foot Print 2020
- Internal Audits and EHS Programs
- All Compliances
- ISO 14001 and ISO 45001 accreditation

2021
- Carbon Foot Print FY 20-21
- ISO 14001 and ISO 45001 surveillance Audit for accreditation

2022
- ISO 14001 & ISO 45001 Validation
- Carbon Foot Print Measurement
- THE Global Ranking
- Environmental Concerns through : Climate,
- Pollution,
- Bio-diversity
- Carbon Sequestration

- Research and Innovation
- Collaboration and partnerships
- Social engagements
- Villagers' skill development
- Health and Hygiene
- Community development
- support for Village development Infrastructure
- Security and Safety programs
- Civil Administration Police Administration outreach

SHIV NADAR UNIVERSITY

BIODIVERSITY MAP

HISTORICAL SIGNIFICANCE

Equisetum Era

Silver Date Palm

Historical Gokhru

CAMPUS HOTSPOTS

WILD INTERACTIONS

Snake Area

Clay Grazers

Night Walkers

BIODIVERSITY GARDEN

INDEX

1. SARUS CRANE
2. NILGAI
3. BAR HEADED GOOSE
4. INDIAN PORCTINA
5. COMMON HOOPOE
6. BLACK NECKED STORK
7. INDIAN ROLLER
8. PAINTED STORK
9. RED AVADAVAT
10. BARN OWL
11. ORIENTAL MAGPIE
12. WHITE THROATED KINGFISHER
13. PIED AVOCET
14. COMMON POCHARD
15. PURPLE SWAMPHEN
16. EGYPTIAN VULTURE
17. BRONZE WINGED JACANA
18. COMB DUCK
19. BLACK HEADED IBIS
20. WOOLLY NECKED STORK
21. PORCUPINE
22. RHESUS MACAQUE
23. SMALL INDIAN CIVET
24. WILD BOAR
25. GOLDEN JACKAL
26. BLACKBUCK
27. SPOTTED DEER
28. NILGAI
29. MUGGER
30. MILD PONY
31. INDIAN COMMON TOAD
32. GOLDEN DAMSELFLY
33. PICTURE WING
34. BLUE PANSY
35. COMMON TIGER
36. COMMON ROSE
37. TEXAS PENNING MANTIS
38. APIS FLOREA
39. SIGNATURE SPIDER
40. COMMON GARDEN BONE
41. CHINESE GRASSHOPPER
42. INDIAN MONITOR LIZARD
43. SPECTACLED COBRA
44. INDIAN FLAPSHELL TURTLE
45. SHISHAM TREE
46. PAPHIA ELM
47. SILVER DATE PALM
48. KIKAR
49. DEVIL'S THORN
50. EQUISETUM
51. BEANS
52. BOUGAINVILLA

DATE PALM GROVE

WETLAND

BIODIVERSITY GARDEN

MULBERRY ASSEMBLY

BUTTERFLY GARDEN

CACTI GARDEN

THANK YOU