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Green Audit Report

Greater Noida Institute of Technology (Engg. Institute)

**Plot No. 7, Knowledge Park II, Greater Noida
Uttar Pradesh 201310 India**



Shreyas Quality Management System

(QCI, GOI Approved LMS & Lean Consultant and ISO 9001 QMS, ISO 14001 EMS,
ISO 45001 OHSMS & ISO 50001 EnMS Certified Organization)

GREEN AUDIT CERTIFICATE

This Certificate has been awarded to

GREATER NOIDA INSTITUTE OF TECHNOLOGY

Plot no. 7, Knowledge Park II, Greater Noida (UP) -201310

in recognition of the organizational efforts towards Green Initiatives
and sustainable development.



SQMS/CERT/GA/23-34/I/01

SQMS Certificate No.

20.05.2023

Date of Issue

19.05.2024

Expiry Date

Dr. R. R. Lakhe(Director)

Shreyas Quality Management System

Note: Audit evaluation is based on information provided by college and Certificate validity is based on organization compliance on environment audit recommendation, applicable legal compliances, Green initiatives, continual maintenance of the system and conduction of regular Green audit.

Regd. Off: 11,3rd Floor, Tulsi Vihar, Abhyankar Nagar Main Road, Abhyankar Nagar, Nagpur-440010.
Phone: 0712-2240012, Mob: 98224 69560 □ E-mail: sqmslakhe@gmail.com, www.sqmsindia.com

Green Audit Report

GREATER NOIDA INSTITUTE OF TECHNOLOGY

Plot no. 7, Knowledge Park II, Greater Noida (UP) -201310



CONDUCTED BY :

SHREYAS QUALITY MANAGEMENT SYSTEM,

11, Tulsivihar, Abhyankarnagar, Nagpur-440010 (MS)

M :9822469560, 0712-2240012, sqmslakhe@gmail.com, www.sqmsindia.com

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ACKNOWLEDGEMENT:

Green Audit Assessment Team thanks **Greater Noida Institute of Technology, Greater Noida** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are due to Principal, IQAC & Team members for giving us necessary inputs to carry out this very vital exercise of Green Audit.

We are also thankful to Department Heads and other staff members who were actively involved while collecting the data and field information.



Dr. R. R. Lakhe

Director

Shreyas Quality Management System, Nagpur.



DISCLAIMER:

Green Audit Team has prepared this report for **Greater Noida Institute of Technology, Greater Noida** based on input data submitted by the representatives of College complemented with the best judgment capacity of the expert team. The audit was conducted on the sample basis by visiting the college and interacting with the various stakeholders. Audit was conducted by interviewing the concerned persons, observing on-site implementation and verifying the documents and records.

While all reasonable care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the recommendations are arrived following best judgments and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

Auditor:

Dr. R. R. Lakhe

Director SQMS, Nagpur



EXECUTIVE SUMMARY:

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green and environmentally sustainable practices on the Campus of the institute which will lead for sustainable development.

Greater Noida Institute of Technology, Greater Noida, is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends of pollution. Being a premier institution of higher learning, the college has actively promoted the various projects for the environment protection and sustainability.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution and also following the practices of ISO 14001-2015



EMS/ ISO 50001:2018 EnMS. It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Botanical garden, Waste Management, Plastic waste management MOU, Paperless Work, Alternative Energy and Mapping of Biodiversity. With this in mind, the specific objectives of the audit are to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the Green and Environment Policy. It can make a tremendous impact on student health, reducing college operational costs and improvement in the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.

BRIEF RECOMMENDATIONS

1. Ensure Green policy, objectives, Environment conservation initiatives plan availability.
2. Pretreat the lab/workshop waste prior to collection and disposal. Disposal of waste to CPCB approved agency /Municipal Corporation. Maintain the record of waste disposal as per local authority norms.
3. Environment (Air, Water, Noise etc.) testing and monitoring with defined frequency to be ensured. (At least once in a year)
4. Facilitate & Ensure PUC for all the fuel vehicles arriving at college.
5. Plantation of traditional trees, medicinal as CSR activity can be undertaken.
6. Green initiatives/practices, 3R (Reuse, Recycle, Reduce) to be adopted/researched upon.
7. Water/Energy Conservation Poster to be displayed to built up awareness.
8. Store electrical and electronic waste at designated location and hand it over periodically to scrap dealers/authorized agency to ensure its proper recycling
9. Installation and maintenance of ETP/STP as per regulatory norms.
10. Rainwater harvesting system needs to be improved and horizontally deployed.
11. Awareness building related to Environmental acts and rules, Good practices amongst the staff and students.
12. Nurture the seed bank concept through awareness.
13. Vermi-composting of green/food waste created in campus to be effectively implemented.
14. Study & research on use of environment, biodiversity, ecology in campus
15. Installation of a suitable Bio-gas plant to save energy used for heating water in laboratories/canteens.



INTRODUCTION:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience. Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

A Nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. Educational institutions now a days are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the energy savings, recycle of waste, water reduction, water harvesting etc.. The activities pursued by colleges can also create a variety of adverse environmental impacts. Environmental auditing is a process whereby an organization's environmental performance is tested against its environmental policies and objectives. Energy audit helps to improve energy performance there by reducing energy consumption, carbon foot print etc. Green, Environment & Energy audit is defined as an official

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examination of the effects a college has on the environment. As a part of such practice, internal audit is conducted to evaluate the actual scenario at the campus. This can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings.



It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. Green auditing and the implementation of mitigation measures is a win-win situation for all the college, the learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. Green auditing promote financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers. Thus it is imperative that the college evaluate its own contributions toward a sustainable future.

As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues. ISO 14001-2015 Environmental Management Systems (EMS) and ISO 50001:2018 Energy Management System (EnMS) are very popular in the industrial sector, but the general belief is that these are something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification.



Goals of Audit:

College has conducted Green audit with specific goals as:

1. Identification and documentation of good practices followed by college.
2. Identify strength and weakness in systems/practices.
3. Conduct a survey to know the ground reality about practices.
4. Analyze and suggest solution for problems identified from audit.
5. Assess facility of different types of waste management.
6. Increase environmental awareness throughout campus.
7. Identify and assess environmental risk.
8. Motivates staff for optimized sustainable use of available resources.
9. The long term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

Objectives of the Audit:

The main objective of the Audit is to promote the Energy and Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To examine the current practices which can impact on environment such as of resource utilization, waste management etc.
- To identify and analyze significant environmental issues.
- Setup goal, vision and mission for practices in campus.
- Establish and implement Energy and Environmental Management in various departments.
- Continuous assessment for betterment in performance in green practices and its evaluation.
- To prepare Green Report on practices followed by different departments, support services and administration building.

In order to perform Green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- **Water management**
 - ✓ Raw Water
 - ✓ Drinking Water
 - ✓ Laboratory Waste Water
 - ✓ Sewage Water

- ✓ Rain Water Harvesting
- ✓ Washroom water
- ✓ Water used in Canteen/Mess
- ✓ ETP/STP
- ✓ Waste water
- **Energy Conservation**
 - ✓ Petrol
 - ✓ Diesel
 - ✓ LPG
 - ✓ Electricity
 - ✓ Batteries
 - ✓ Solar Energy
- **Green area management**
- **Air & Noise Quality Monitoring**
- **Waste Management**
 - ✓ Hazardous Waste
 - ✓ Non- Biodegradable Solid Waste
 - ✓ Biodegradable Municipal Solid waste Bio- Medical Waste
 - ✓ Kitchen Waste
 - ✓ E-waste management
- **Environment Consciousness**

Review of the Documentation:

- Green Policy, Practices considering ISO 14001 guidelines & applicable legal requirements
- Data source for year 2022-23

Interviews:

Interviews were conducted with the Principal, and also faculties and students.

Physical Inspection:

The audit team virtually inspects the college to inspect the campus and review Green and Environmental actions.

Auditors for Green audit:

Sr.No	Name of Auditor	Credentials
1	Dr. R. R. Lakhe	QCI registered Lead Auditor for QMS, EMS, OHSAS; Lead Auditor for QMS, EMS, OHSAS, EnMS, NBQP QCI registered

		QMS, LMS and business improvement with 35+ Years of Industrial, Consultancy, Training, Audit and Research experience Provided consultancy, Auditing, Training to more than 200 organizations for ISO 9001, ISO 14001, ISO 45001, ISO 50001, ISO17025, Green/Environment/Energy
2	Mr. Nasir Sayyad	BEE energy auditor, ISO 50001 LA, ISO 9001,14001,45001,50001 Internal auditor with 35+years of experience in Thermal Power Plant



ABOUT COLLEGE:

Greater Noida Institute of Technology (Engineering Institute), Greater Noida

Approved by AICTE, New Delhi & Affiliated to Dr. APJ Abdul Kalam

Technical University, Uttar Pradesh Lucknow

Established in the year 2001, GNIOT group of institutions has become one of the leading institutions for management and engineering programs worldwide. Our aim is to educate leaders who build a strong organization and wisely leverage the power of markets to create lasting value.

Vision:

“Be known globally for value-added education, innovation, and research at the intersection of disciplines in service of humankind”

Mission:

- Place a multidisciplinary engineering education ecosystem that transforms learners into future innovators, entrepreneurs, and professional leaders.
- Create an ambiance of interdisciplinary research, innovation, and creativity to address regional and global challenges for benefit of human life and the environment.
- Provide the environment for enhancing knowledge, and inculcating critical & design thinking, life skills through quality learning systems.

- Collaborate with globally renowned academic & research institutions and corporates for improving productivity and economics.

Quality Policy:

Continuing to prosper a clean and healthy learning environment and culture of intelligence for staff and students that can encourage active teacher participation and foster a deep desire for students to provide an industry readiness education and thus be a useful and confident person in the society.



Core Values:

“At GNIOT we believe in laying a solid foundation for our emerging professionals.

The current situation requires innovation, ingenuity, continuous improvement and the right ideas to make the way of our life easier. We strongly believe in these values and urge participants to adhere to them!”

Courses offered:

A. Bachelors Degree:

1. Bachelor of Technology (Artificial Intelligence And Data Science)
2. Bachelor of Technology (Civil Engineering)
3. Bachelor of Technology (Computer Science and Design)
4. Bachelor of Technology (Computer Science & Engineering)
5. Bachelor of Technology (Computer Science & Engineering – Artificial Intelligence)
6. Bachelor of Technology (Computer Science & Engineering – Data Science)
7. Bachelor of Technology (Computer Science & Engineering – LOT)
8. Bachelor of Technology (Computer Science & Engineering – Artificial Intelligence & Machine Learning)
9. Bachelor of Technology (Electrical Engineering)
10. Bachelor of Technology (Electronics & Communication Engineering)

11. Bachelor of Technology (Information Technology)
12. Bachelor of Technology (Mechanical Engineering)

B. Masters Degree

1. Master of Business Administration,
2. Master of Computer Application,
3. Master of Technology (Mechanical Engineering)
4. Master of Technology (VLSI Design),
5. Master of Technology (Civil Engineering)
6. Master of Technology (Computer Science & Engineering).

Ways of Learning

Learning at GNIOT can be manifold and you will be encouraged to explore a variety of different approaches of studies during your time here with numerous opportunities for developing your individual potential.

Learning Curves

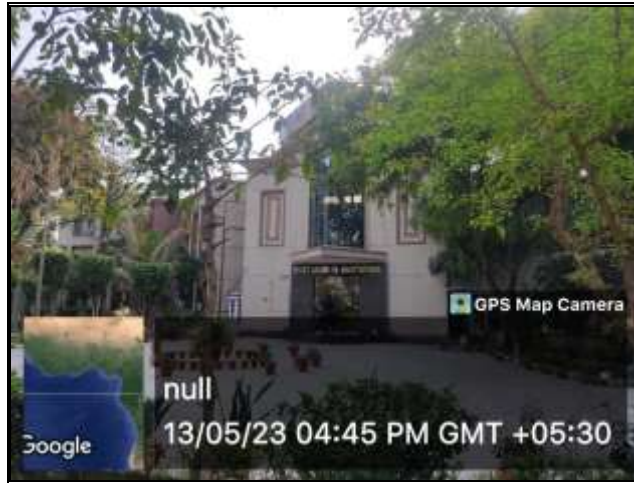
At GNIOT traditional teaching methods such as Lectures and Seminars are complemented by team projects, tutorials and practical assignments. Interactive educational questionnaires are available, which permits you to study at your own pace at your own time.

Personal Growth

Personal growth and professional development are the key objectives of the professional education. At GNIOT you will develop your ability to think independently, argue critically, solve problems and communicate effectively. These valuable life skills will make you highly employable in today's job market. Not only this you shall come out as an effective total personality.

Key To Success

Professional courses are valuable investment, bringing you immediate rewards and a life time of benefits but it is necessary for you to exert and take advantage of the variety of the courses which open to you a wealth of career choices. At GNIOT, you can develop your expertise and knowledge in a supportive and stimulating academic environment. Studying at GNIOT can be as challenging as it is captivating, but plenty of professional advises are available. You can use your valuable time here and become a committed professional.



Environment Policy :

- To raise awareness of environmental issues among its staff/students/visitors and encourages initiatives leading towards a clean environment.
- To plant more and more trees to sustain the biodiversity.
- To explore options for using waste / roof water wherever possible.
- To comply with all applicable legal and regulatory requirements for the protection of the environment.
- To minimize waste generation by developing recycling systems and eco-friendly waste disposal practices.
- To replace, wherever possible old conventional methods by more eco-friendly techniques.
- To develop paperless system wherever possible by giving emphasis on digitalization process.
- To develop operating procedures to conserve natural resources and energy by minimizing their consumption and wastage.
- To develop system and procedures to reduce sound pollution and air pollution.

Address:

Greater Noida Institute of Technology (Engineering Institute), Greater Noida

Plot no. 7, Knowledge Park II, Greater Noida UP (201310)

AICTE Approval: F.No. Northern/1-9321284126/2021/EOA

Date: 01-07-2021 for Academic Year 2021- 22

AICTE PIO = 1-10626904

University approval: AKTU/2021/13492(132)

Dated: 31/08/201

College Code = 132

Phone & Fax Number with STD code

0120-2328214, 0120-2328215.

Toll Free Number: 18002746969

Longitude & Latitude

24.46°N & 77.49°E

Email & Website

Email: director@gniot.net.in

Website: www.gniot.net.in

Nearest Railway Station

Ghaziabad(28Km.)

Nearest Airport

IGI Airport, Delhi (60Km.)

Academic hours at the Institution

09:00 am to 05:00 pm

Type of Institution

Private-Self Financed Non-Minority Co-Ed

Name and Address of the Trust

Shri Ram Educational Trust.

Plot no. 7, Knowledge Park II, Greater Noida

Name and Address of the Director

Prof. (Dr.) Dhiraj Gupta

Greater Noida Institute of Technology, (Engineering Institute)

Plot no. 7, Knowledge Park II, Greater Noida

Name and Address of the Affiliating University

Dr. APJ Abdul Kalam Technical University,

Sec11, JankipuramVistar, Lucknow, U.P.

www.aktu.ac.in

Information of infrastructure and other Recourse Available

• Number of Class Rooms 56

• Size: 70 Sq Meter

Number of Tutorial Rooms: 24

Size: 35 sqm

• Number of Laboratories: 75

Size: 70 sqm

Number of Drawing Halls :02

Capacity: 200 Person

• Number of Computer Centers :16

Capacity:600 students

• Central Examination Facility: YES

Number of Rooms: 56

Capacity: 2300

•Barrier Free Built Environment for disabled and elderly persons: YES

Library

• Number of Library Books: 103953

• Number of Library Titles: 9595

• Number of Library Journals: 120

E-Library Facilities: Available

Membership: DELNET, NPTEL, SAWYAM, NDL, E-Shod Sindhu

E-Resources (E-Nalanda) : Springer Link, Science Direct, Mc Graw hill, Pearson E-Books, Taylor & Francis e-books, Wiley, JSTOR, Emerald, Cambridge Core, BSP E-Books, DOAJ – Directors of open Access Journals

Laboratory & Workshop

As per Norms

➤ Computing Facilities

No. of PCs : 755

No. of Printers : 61

Internet Bandwidth : 1 Gbps

No. of system connected by LAN : 755

No. of system connected by WAN : 755

Major Software packages available : 10 System Software
50 Application Software

Special purpose facilities available : MS Team

(Conduct of online meeting/webinars/workshops etc.)

Facilities for conduct of classes/ : MS Team

courses on online mode (theory/practical)

Innovation Cell : YES

Social Media Cell : YES

➤ **Teaching Learning Process**

- ❖ Interactive Classrooms
- ❖ Case method of Teaching
- ❖ Use of modern teaching aids
- ❖ Group discussion and presentation
- ❖ Audiovisual Classrooms
- ❖ Instructional films on various subjects
- ❖ Guest Faculty/Guest Speaker
- ❖ Visit to Industries
- ❖ Summer Training
- ❖ Project Work
- ❖ Detailed coverage of syllabus
- ❖ Coverage of topics beyond syllabus
- ❖ Personality Development Programs
- ❖ Well-designed Academic Calendar & implementation
- ❖ Faculty Development program in campus and off campus
- ❖ Seminars, Workshop & Research Work

➤ **Internal continuous Evaluation System and place**

The Institute holds two class tests and one Pre-University Test during a semester.

➤ **Students' assessment of faculty, system in place**

We are in practice to taking student feedback in every six months on the Institutional Governance/Faculty performance through Student ERP login.

➤ **Games & Sports Facilities**

Both indoor & outdoor sports activities are conducted at regular intervals for students to maintain their physical fitness essential for them to perform their best in academic also. The Institute has dedicated sports complex for the students to play football, cricket, volley ball, basketball, table-tennis and badminton etc.

Other indoor games facilities are also available.

➤ **Extra Curriculum Activities**

Yoga Classes: Regular yoga classes are available for the students, who are residing in the hostel.

Seminar: The students have created various societies and through these societies with the help of Institute, they conduct seminars and conferences at regular intervals. This enables them to improve their communication and organizing ability.

Cultural Activities: Students are encouraged and provided necessary facilities and guidance to conduct cultural programs, to develop & display their talents. The cultural activities are carried out at regular intervals without affecting programs. The welcome party for the first year and farewell party for the final year students are conducted regularly

Research Project / Consultancy Work

DETAILS OF RESEARCH PROJECT/CONSULTANCY WORKS

❖	No. of Projects carried out, funding agency, Grant received	03
❖	Publication (if any) out of research in last three years out of masters projects	40
❖	Industry Linkage	YES
❖	MOUs with Industries	06

LOAD AND SUBSEQUENT EOA TILL THE CURRENT ACADEMIC YEAR

Available in the Institute web-site :www.gniot.net.in

ACCOUNTED AUDITED STATEMENT FOR THE LAST THREE YEARS

Available in the Institute web-site :www.gniot.net.in

- Extension of Approval of AICTE
- Accounted audited statement for last three years

Available in the Institute web-site:www.gniot.net.in

BEST PRACTICES ADOPTED, IF ANY

- ❖ Nodal Centre of Human Values & Ethics of Dr. APJ Abdul Kalam Technical University, Lucknow
- ❖ Adopted 05 villages under Unnat Bharat Abhiyan
- ❖ MSME-Business Incubation Centre approved by Ministry of MSME, Government of India.
- ❖ Starts campus cloud networking by TERRE & AICTE.
- ❖ MSME-Design Centre under Ministry of MSME, Government of India.
- ❖ In campus 2 Start-ups

S.NO.	NAME	DESIGNATION	STATUS IN IQAC
1	Prof.(Dr.) Dhiraj Kumar	Director	Chairman
2	Mr. Gaurav Gupta	Vice- Chairman	Management
3	Prof.(Dr.) Amit Kumar Agarwal	HoD AI-ML & IoT	Coordinator
4	Prof.(Dr.) Ajay Sahu	Professor-IT	Co-coordinator
5	Mr.Asif Khan	Asst. Professor- CSE	Member
6	Ms. Pooja Sharma	Asst. Professor-AI-ML	Member
7	Dr. Avinash Ravi Raja	Asst. Professor-ME	Member
8	Mr. GirendraBhati	Asst. Professor-ME	Member
9	Ms.Akshika Jain	Asst. Professor-IoT	Member
10	Mr.Shashikant Kaushal	Asst. Professor-CE	Member
11	Ms. Vinita Chauhan	Asst. Professor-MBA	Member
12	Mr. Anil Madhwal	Registrar	Sr. Admin Officer
13	Mr. Vaibhav Mathur	Students	Students
14	Mr. Dhruv Shrma	Alumni	Alumni
15	Mr. Navin Singh Arya	Employer	Employer

CULTURAL CLUB

S. No.	Name	Committee	Department	Remark
1	Dr. Minakshi Awasthi	Convener	AS	Faculty
2	Ms. Vasudha Tiwari	Co-Convener	CS	Faculty
3	Dr. Ravindra Kumar	Member	AS	Faculty
4	Ms. Pallavi Gupta	Member	EE	Faculty
5	Ms. Vidha Sharma	Member	CS	Faculty
6	Ms Shipra Srivastava	Member	IT	Faculty
7	Dr. Rakhi Bhardwaj	Member	EC	Faculty
8	Mr. Gagan Varshney	Member	ME	Faculty
9	Ms. Shreeja Kakkar	Member	CE	Faculty
10	Ms. Ashika Jain	Member	CS -AI&ML CS-IoT	Faculty
11	Mr. Shubham Goel	Member	EE	Faculty
12	Mrs. Ranjana	Member	MBA	Faculty
13	Mr. Simranieet Singh	Member	MCA	Faculty

Frequency of the Board Meeting

Governing Body: Twice in an Academic Year

Academic Advisory Body: Every Three Months (Quarterly)

Student Feedback on Institutional Governance/ Faculty Performance

- a) After each semester reach student fills online feedback form for the faculty who taught them.
- b) The faculty is graded on scale of 1 to 5 for 1 each Attribute.
- c) The data is compiled, analyzed and the faculty is briefed accordingly by Director/HOD's.

Grievance Redressal mechanism for Faculty, staff and Students

Online Grievance Redressal Mechanism available.

No. of Branches: 18
No. of Students: 2672
No. of Faculty Members: 181
No. of Non-Teaching Members: 115
No. of Buildings: ... 02
Is the brochure of the college available if yes kindly attached: OK
No. of Buildings: 02
No. of Hostel: 02
No. of Boys hostel./ Total occupancy: 1
No. of Girls hostel./ Total occupancy. 1
Is there any campaign drive for awareness amongst staff and student:
Is there any training program related to green audit conducted:
Vision Statement, Mission Objectives: Yes
Do you have Environment Policy or Green policy? Yes
Total campus area: 17500 m²

Green Audit Committee		
S.No	Name	Designation
1	Dhiraj Gupta	Director
2	Madan Kumar Sinha	Manager
3	Kapil Kumar	Astt. Professor
4	Amit Agarwal	HOD

Committee with Green Initiatives



Good Points:

1. College has formed the team of faculty and student to enhance the green environment, to maintain biodiversity on the campus and also participates in preventing pollution in society through various drives. College is playing crucial role in Environment and Energy Conservation. Various programs are also conducted as a part of plantation
2. College has installed solar panels as renewable energy source in hostel.
3. Environmental subject is included as course contents in at graduation level as Environmental Chemistry etc.
4. Tree plantation at college premises and forest is taking place and encourages students to plant the tree.
5. As a part of the Green Initiatives the practices followed are:
 1. Plantation at Campus and nearby area
 2. Solar Panels as renewable energy source
5. Environmental and Energy conservation related workshops, events are organized as per the guidelines of Institute.
 - Arranged training program for the staff of the college on Green Environment.

A. WATER MANAGEMENT:



This indicator addresses water consumption, water sources, irrigation, storm water, appliances and fixtures. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

Aim and objective:

- To save water
- Minimization of water wastage
- To conserve the water

Observation:

Water conservation is a key activity as water availability effects on the development of the campus as well as on all area of development such as farming, industries, etc. Keeping this in view water conservation activity is carried out by the college.

Water is used for drinking purpose, toilets and gardening. The waste water from the RO water purifier is used for gardening purpose. During the survey no loss of water is observed neither by any leakages nor by overflow of water from overhead tanks. The data collected from all the departments is examined and verified. On an average the total use of water in the college is 2,87,000 L/day.. Rain water harvesting units are also functional for recharging ground water level.



Wastage of water is prevented by closing the valves manually. No leakage of water is detected during the audit. The waste water mainly comes from labs, washrooms & kitchen & waste water is released to soap pit. At present waste water is not used for any other purposes and is released in common drainage. Pre-Treatment of lab water is not carried out at present using neutralization.

The sources waste water are categorized in two types:

- I. Laboratory Waste Water which can be said as Effluent and
- II. Domestic Waste Water i.e. Sewage Water.

Sources of Water:

- Municipal corporation Water ✓
- Well water X
- Bore water ✓
- No. of flow meters attached and their locations. X

Location/ Area	Avg. total consumption of water per day
1. College	120 KLD
2. Gardening	10 KLD
3. Labs	1 KLD
4. Hostel	150 KLD
5. Utilities/uses	1 KLD
6. Canteen	5 KLD

Information for Report.

- 1) Capacity of bore water motor in Watts -
2 H.P 2 motor. - 1.5 KW X 2
1.5 H.P 2 motor - 1.15 KW X 2
- 2) No of Sprinkler - 3.
- 3) Total Water consumption - 2,87,000 per day.
Water consumption per person per day - 106 liter.



Institute has-

1. Drip/Sprinkler irrigation system
2. Rain Water harvesting system
3. Water conservation through sensor urinals, Autocut sensors for water tanks



Recommendations:

The team of Auditors appreciates the College administration for the good practices in conserving water such as regular plumbing services, regulating the water flow from top. There is willingness to explore the option of Waste Water Treatment thus the (plant based) recycled water can be utilized for the toilet flushing and gardening if it is implemented successfully. It is not possible to estimate the exact quantity of water used by different departments. However the highest consumption of water is most likely happening in toilets, hostels, canteen and in chemical lab in view of the escalation of water scarcity in the region team recommend basic steps be carried out to optimize the water utilization at the college level, which will also contribute to reducing the related expense: College has also work on project like rain water harvesting.

- I. Recycling and reuse of waste water in labs can be thought of.
- II. Water testing to be carried out (Inlet, Outlet, Lab waste, bore well, mess etc.) on periodic basis and opportunity to be explored to retreat and reuse.
- III. Putting up notices in all washrooms and near all water coolers about the need for saving water, and simple tips like ensuring all the taps are properly closed.
- IV. Leakages are immediately brought to the notice of the management; respective floor cleaning staff could be given the responsibility to keep a check on every floor if any taps are open or leaking.
- V. To eliminate the spillage and over usage of water in washbasins, urinals and toiler push taps are highly recommended.
- VI. Training to the cleaners in economical use of water for cleaning purposes and a system in place for immediate response when issues of water leakage are observed so that water losses are prevented.

- VII. Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged. In campus small scale/medium scale/ large scale reuse and recycle of water system is necessary.
- VIII. Drip sprinkler irrigation system for gardening to be enhanced
- IX. Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration (Drinking Water) process and ensure that the equipment's used for such usage are regularly serviced and the wastage of water is not below the industry average for such equipment's used in similar capacity.
- X. Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.
- XI. All water taps to be checked for its leakage particularly in toilet.
- XII. Identification of areas to be carried out such as compost making area, water harvesting tank, bore well used for water harvesting purpose, bore well used for consumable purpose, parking area of staff, students, hazard area etc.
- XIII. Water meter to be installed on bore well as well as well which is used and daily monitoring and record of water used to be maintained.
- XIV. Cleaning schedule of water purifier to be made and followed.
- XV. Water consumption of the college to be monitored and graphs/table to be prepared.
- XVI. Water to be tested from various sources including the potable water purifiers and in canteen.
- XVII. Maintenance of water purifier to be done including replacement of filters.
- XVIII. Special Internal Water Audit to be conducted quarterly and should be submitted to environment committee.
- XIX. College does not have ETP, STP plant to treat the Sewage water, mainly comes from washrooms of college etc.
- XX. The effluent produced in labs to be released after treating and neutralization and collected at single point and handed over to Municipal Corporation/CPCB approved agency. Which presently is not carried out by the college.**



B. ENERGY USE AND CONSERVATION:

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment. The college primarily uses energy in the form of electricity provided by State Distribution. A proper analysis of energy consumption, we need to understand the electricity consumption over at least one academic year, and ideally three previous years. Major use of the energy is at office and laboratories of different departments for lighting, practical and laboratory work. The main electric appliances in the college are fans, computers, LCD projectors, lab equipments, and accessories. Major energy consumption equipments are the high wattage electrical appliances such as Tube lights, Water coolers, fans, lab equipments etc.

Aim and objective:

- To save conventionally produce electric energy
- Use of non- conventional source of energy
- Use carbon neutral electricity
- Minimization of electric expenses

Observations:

In all sections of campus lecture rooms, office rooms, laboratories etc are spacious voluminous and airy, having proper natural light and ventilation. Hence actual requirement energy consumption in lightening is minimal. The air conditioner in the management chamber or in Principal Chamber are rarely used and avoiding unnecessary use of the same is a part of the green practice in the College. Besides this, **solar system is also installed in the campus as an alternate renewable source of energy for hostel.**

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

Following Energy Sources are used in the college:

- Electrical
- Solar
- Diesel/ Petrol
- LPG



Partner : 2000034862
 Name : GREATER NOIDA INSTITUTE OF TECHNOLOGY
 Address : 007,KNOWLEDGE PARK-2,GREATER NOIDA,201308

Rate Category : HV-1
 Contractual Level : 650.00 KVA

Annexure-Meter Reading Statement (Net Metering Consumers)

Meter Serial No.	Start Date	Start Import Reading	Start Export Reading	End Date	End Import Reading	End Export Reading	M.F.	Net Units (Import-Export)/M.F.- Carry Forward Export	UOM
20000007	19.09.2022	2408.6200	245.2650	19.10.2022	2542.4800	257.2600			
20000007	19.09.2022	2247.5450	252.7200	19.09.2022	2408.6200	255.2600	750.00	86820	KVAH
20000007	19.07.2022	2077.5700	251.2100	19.08.2022	2247.5450	252.7200	750.00	118901.25	KVAH
20000007	19.06.2022	1921.6100	248.6600	19.07.2022	2077.5700	251.2100	750.00	126423.75	KVAH
20000007	19.05.2022	1746.2150	246.7000	19.06.2022	1921.6100	248.6600	750.00	114982.5	KVAH
20000007	19.04.2022	1571.6550	245.4300	19.05.2022	1746.2150	246.7000	750.00	130001.25	KVAH
20000007	19.03.2022	1462.3050	239.9300	19.04.2022	1571.6550	245.4300	750.00	130042.5	KVAH
Carry Forward Export Units								77887.5	KVAH

Billing Month	Units
DCT 2022	0
SEP 2022	0
AUG 2022	0
JUL 2022	0
JUN 2022	0
MAY 2022	0
APR 2022	0

Electrical Bills for last 12 months ✓													
Month	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Electrical Bill (Units)	79526	128673	129106	114491	125896	119040	98808	49338	38471	49552	38362	45963 KWH	62809 KWH
Amount (Rs)	834124/-	1397977/-	1414297/-	1273463/-	1293769/-	1214710/-	960980/-	566474/-	479885/-	582478	454192/-	524734	608439
<p>- How many no of energy meters you have? & their locations. 1 at Meter room</p> <p>- Do you measure energy consumption building wise or dept. wise? Give details? No</p>													

Details of on. Consuming device/utilities used in institute

Sr. No.	Utility	Quantity/Nos
1	Split AC	27
2	Window AC	147
3	LED Light	2000
4	Tube light (other than LED)	300
5	Cooler	-
6	Fan	1300
7	Laptop	-
8	Desktop LED	-
9	Desktop Tube type	-
10	Water cooler	-
11	Street light (write type)	LED - 50
12	Printer	-
13	Projector	-

- Has annual maintenance contract been given or is preventive maintenance plan is available for ACs.

No, all inhouse

- List of major consuming equipments/ devices lab instrument in institute?

- Are safety precautions like earthings , checking of earth resistance, 3 pin plug with details.

- No. of generator set : *1*

- Capacity: *380 KVA*

- Total running Hr/Year: *75 hr / yr*

- Total energy use by generator: *18000 / yr*

- PUC testing: *-*

- Electrical testing: *Service done yearly*

F) Solar Installations:

- No. of solar panels installed? *Yes*

- Capacity? *281 KW / day*

- Amount of energy generated through solar? *25000 unit / month*

- Amount of solar energy utilization against total energy requirements/year.

- Energy done by Institute to reduce electrical energy consumption.

LED Lights





- Computers have LED screens; Computers are always kept on standby mode with power saving screensavers.
- In order to save energy, the college saves energy by using LED tubes and bulbs: 70%.
- Since the design of classrooms is intended in a such a way that , the classrooms will remain well ventilated and full of light so the requirement of tube lights and fans will be very less hence energy can be saved.
- Non-teaching staff switches on all lights & fans in morning and shut down directly in evening.
- There are no signage encouraging users to switch off light and fans to save electricity. Providing signage through screensavers & posters near electrical switches will help in making students responsible for conservation of electricity.
- There is no renewable source of energy used e.g. Solar, Wind. However, the institute is planning installation of solar panels to meet the electricity requirements in the year.
- Save electricity by proper maintenance of the wiring and electrical equipment, maintenance of electrical appliance and fitting is essential.
- Adopt solar power to light up the roads, exterior site of campus section.

- Cleaning of tube-lights/bulbs to be done periodically, to remove dust over it.

Green technology used for energy conservation:

- Energy efficient electronic gadgets like 5* rated air conditioners are used and maintained regularly.
- Unwanted usage of electric power is prohibited in Institute.
- LED bulbs were used in the class rooms, laboratories, administrative offices, libraries, auditorium hall and staff room. Now, the power consumption is reduced due to efficient use of LED bulbs.

Following simple ways to reduce electricity consumption can be followed:

1. Don't Leave Electronic Appliances On Standby Mode: It is a common tendency among the people to switch off their electrical appliances using the remote, leaving them on standby mode. They fail to realize that the device is still consuming 85% of electricity energy and wasting the valuable energy reserve. Instead, by switching off the main power button or by unplugging the socket, they can make a commendable contribution in saving electricity energy.

2. Lighting: The traditional bulbs and tube lights consume a large amount of electricity energy, making a contribution of almost 10 to 15 percent in the electricity bill. In lieu of these outdated bulbs, one must prefer purchasing an energy saving bulb and the fluorescent tubes that glows brightly without consuming more energy.

3. Bring Home Solar Garden Lights: To lighten your garden and add grace to its look, one can easily bring home the highly efficient solar garden lights as they do not entail you to dig trenches or set up wiring connections. Users can easily arrange these fitting anywhere they desire and highlight the dark areas of their gardens. These lights get charged up during the day and illuminate the garden at night.

4. Check out The Energy Star Label: While purchasing electronic appliances like air conditioner, fans refrigerator, microwave and other household appliances, one must make sure that the appliance has an energy star label on it that can help to cut almost 30 percent of the electricity bills.

Recommendations:

1. All electrical loose wire to be dressed up properly.
2. Electrical Earthing of the college to be checked regularly.
3. Equipments like Computers to be used with power saving mode. Also, campus administration to be runs switch –off drill on regular basis.
4. Awareness for the use of electricity and paper to be developed in the college.

5. Instruction such as all electrical appliances (fans/AC) shall be switched off when “not in use or at the end of the day” to be displayed.
6. College takes steps to purchase fans, refrigerators and air conditioners with low energy consumptions with maximum star ratings.
7. Use of Diesel generator to be avoided (to reduce the consumption of oil, record of consumption of diesel to be maintained.
8. Enhanced renewable energy source capacity.
9. The display of the instruction boards/to be displayed on each classrooms/ lab for **“switching of the fans and lights when not required”**.
10. Switching to star rating electric appliances in phase wise manner.
11. Carbon Sequestration study shall be carried out before plantation of Green Belt.
12. Energy Consumption for each building should be estimated to design the energy conservation plan.
13. Instead of out-sourcing the Annual Maintenance of Electrical Equipment college concern department staff shall take that responsibility
14. Energy saving awareness shall be done by displaying the boards at appropriate place.
15. List of electrical gadgets used in every section, departments, hostels, canteens to be prepared with electrical capacity required.
16. Encourage natural ventilation and illumination by alteration in the building structures whenever going for new constructions.
17. Air condition in offices needs to be set on 26°c.
18. Optimise temperature to 26 degree Centigrade in AC
19. Regular preventive maintenance of AC.
20. Installation of Capacitor Bank in Control Panel to improve power factor
21. Proper use of Day light in class room / faculty room.
22. Display Energy saving poster at prominent places
23. Extra protection MCCB to be installed in each control panel.
24. Proper Maintenance of Three Boring machines which are used for Drinking water
25. Installation of BEE Approved AC and BLDC Fan in future to reduce Energy consumption
26. Regular preventive maintenance of Solar Panel
27. Occupancy sensor to be installed in Wash room
28. Proper earthing of all equipment s to be checked regularly

C. GREEN BELT AREA & BIO-DIVERSITY:

The Green Belt Area is meant for conservation of nature and esthetic value of the college premises. The area of Green Belt in this College is around 18560 sq.mtr. The Green Area in the college includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programme.

The area is immensely diverse with a variety of tree species performing a variety of functions, Sprawling lawn/ garden. Most of these tree species are planted in different periods of time through various plantation Programmes organized by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many species of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favorite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colors. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees, enormous variety of flowering plant, give them a monument – like quality.

They also remind us the glorious history of our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cut down dust and storms This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards This also helps in ensuring that Environmental Policy is enacted, enforced and reviewed using various environmental awareness Programmes.

Observations:

D) Green Area/Plantation

- Total land area available for plantation. 18,562.52 m
- Total land area covered by plantation. 18,562.52 m
- No. of trees planted in campus. 250
- List the types of trees planted which are environment friendly.
..... Neem, Pipal, Sal, Ficus, Palm, Delonix, etc
- Do you conduct tree plantation drive?
..... Yes
- Survival rate of the trees?
..... 100%
- No. of trees cut in the last 3 years?
.....
- Have you done any plantation outside the campus as CSR activity? If yes, give details.
..... Yes
- Do you conduct any plantation drive in nearby areas?
..... Yes

Highlights:

1. Good Plantation
2. Botanical Garden developed.

जीएनआइओटी के छात्रों ने किया पौधारोपण

जस, घंटर नक्षत्र : कॉलेज फॉर्क सिविल जीएनआइओटी कॉलेज में वीथ रोपण अभियान का आयोजन किया गया। कॉलेज ने अभियान का नाम एक छात्र एक पौधा रखा। अभियान के तहत कॉलेज के साथ ही कॉलेज फॉर्क के विभिन्न क्षेत्रों में लगभग दो हजार पौधे लगाए गए। अभियान के तहत फल व उपवासदार पौधे लगाए गए। पौधों की देखरेख छात्रों के द्वारा ही की जाएगी।

कार्यक्रम में कॉलेज के मानवीय मूल्य शिक्षा प्रकोष्ठ एवं सोशल क्लब ने भी सहयोग किया। इस अवसर पर कॉलेज के चेयरमैन बीएल गुप्ता व वाइस चेयरमैन राजेश गुप्ता ने कक्ष धरती को हर-भरा बनाना हम सभी का कर्तव्य है। हम जितने अधिक पौधे लगाएंगे पर्यावरण उतना ही शुद्ध होगा। सभी से अपील की कि जीवन के विभिन्न चरणों को यादगार बनाने के लिए पौधे अवश्य लगाए।



येने के जीएनआइओटी कॉलेज में वीथों के साथ विद्यार्थी • डॉ. बालेंज

जीएनआइओटी के छात्रों ने किया पौधारोपण

जस, घंटर नक्षत्र : कॉलेज फॉर्क सिविल जीएनआइओटी कॉलेज में वीथ रोपण अभियान का आयोजन किया गया। कॉलेज ने अभियान का नाम एक छात्र एक पौधा रखा। अभियान के तहत कॉलेज के साथ ही कॉलेज फॉर्क के विभिन्न क्षेत्रों में लगभग दो हजार पौधे लगाए गए। अभियान के तहत फल व उपवासदार पौधे लगाए गए। पौधों की देखरेख छात्रों के द्वारा ही की जाएगी।

कार्यक्रम में कॉलेज के मानवीय मूल्य शिक्षा प्रकोष्ठ एवं सोशल क्लब ने भी सहयोग किया। इस अवसर पर कॉलेज के चेयरमैन बीएल गुप्ता व वाइस चेयरमैन राजेश गुप्ता ने कक्ष धरती को हर-भरा बनाना हम सभी का कर्तव्य है। हम जितने अधिक पौधे लगाएंगे पर्यावरण उतना ही शुद्ध होगा। सभी से अपील की कि जीवन के विभिन्न चरणों को यादगार बनाने के लिए पौधे अवश्य लगाए।



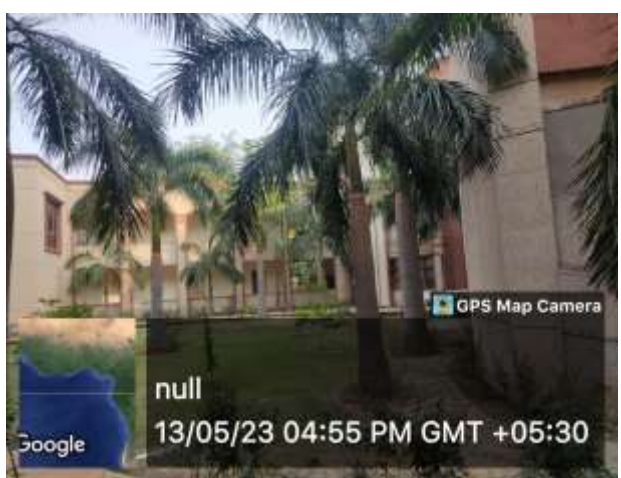
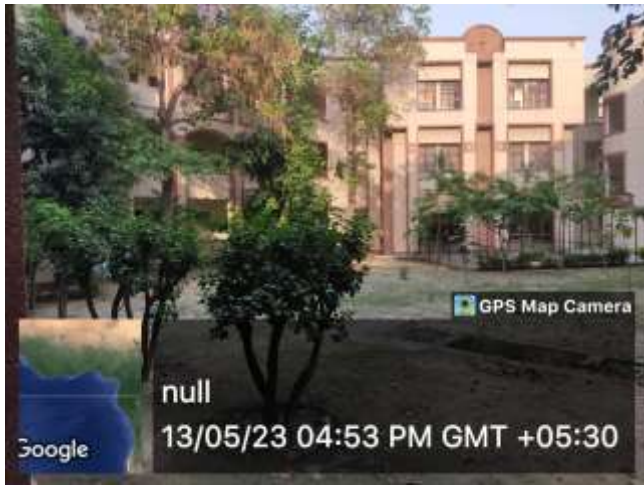
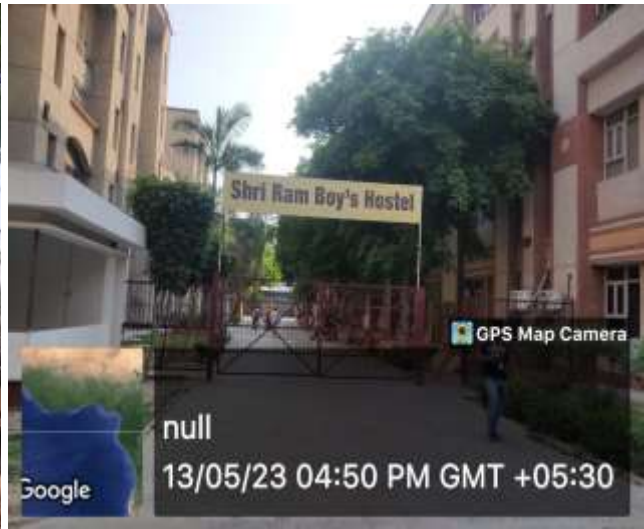
येने के जीएनआइओटी कॉलेज में वीथों के साथ विद्यार्थी • डॉ. बालेंज

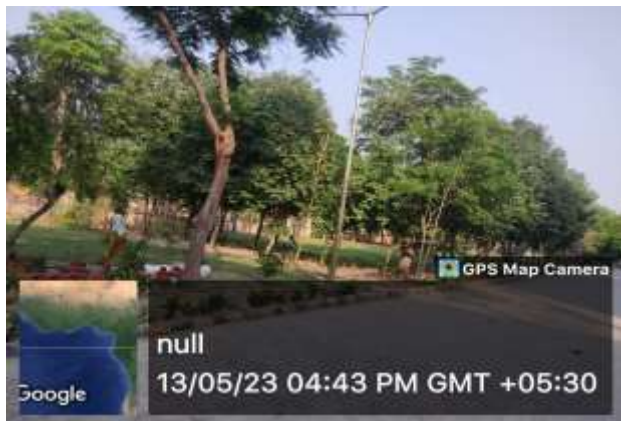
Tree Name		कडीपत्ता	
नीम	56	गारापति	1
आम्र	39	शहजना	1
जामुन	101	तिकोजा	43
अमरुप	121	ढवलबेरिया	7
पीपल	10	गुलजोहर	6
फाईकस	172	कपतार	21
इशम	36	सनी	14
पीलशवन	21	सुपासी	1
व्यागतान	78	आडू	2
खीर	15	कठेद	4
रौमेल	5	रातकीरानी	1
गारिधल	2	ढठ	1
वैलपापर	21	अरुन	2
चम्पा	16	जंजाजलेबी	7
वैतपास	52	प्रजवा	5
ढनार	24	पापरी	2
बीजू	9	सहवस	58
आमला	117	कलीदा	3
हुदुग	5	लिंधी	1
अशोक	65	भौलश्री	1
सैददी	4	अमलताश	5
स्टीनिया	73	पीक	26
अफेदा	2	फररवेरिया	4
फुफडा	32	तिपात	2
वैतलकस	9	वैशिया	3
भौममी	14		1
रुबन्गल	2	Total =	1627 1627
हुडदल	57		Tree with marks
कनैहर	229		
पाण्डा	5		
पादनी	7		

Tree Plantation Program



Clean and Green Campus





Recommendations:

The Management of College may consider on top priority that:-

- The Green Belt is to be developed as per the guidelines of NGT
- The Biodiversity is to be maintained while considering the plantation in future.
- The selection of trees species to be based on environmental conservation and carbon sequestration value.
- Competitions for bird species identification and plant species identification can be conducted.
- Artificial nests and water ponds are recommended to attract different birds in their migrating and breeding season.
- Watering schedule to be planned according the season.
- Drip irrigation is strongly recommended to conserve the water.
- Reuse of the water shall be done instead of use of fresh water for watering the plants.
- Details about the trees planted location wise/species wise etc. to be maintained every year.

D. AIR QUALITY & NOISE QUALITY MONITORING:

Since air quality plays a vital role for good health. Air Quality monitoring instrument is used to monitor quarterly the criteria pollutants. The most important air quality parameters, which are measured, are NO₂, SO₂ & PM₁₀. The other criteria pollutants such as Ozone, Carbon Monoxide and Lead are not measured because there are no nearby Industries located near the institute, which are emitting these pollutants. Noise equally plays a vital role in the environment, hence noise measurement are also done at the institute quarterly.



Carbon Foot Print:

A carbon footprint is a measure of how much someone is contributing to the gases that contribute to global climate change. More scientifically, it is the amount of anthropogenic carbon dioxide (CO₂) emissions (those resulting from or produced by human beings) attributable to an individual or a household or an organisation, generally resulting from their direct or indirect use of energy. Although we talk about a 'carbon footprint', it would be more accurate to talk about a 'carbon dioxide footprint'. A carbon footprint is normally calculated in tonnes of carbon dioxide equivalent (tCO₂e) but occasionally footprints are calculated in tonnes of carbon equivalent (tC). You will need to multiply by 44 and divide by 12 to convert from tonnes of carbon to tonnes of CO₂ equivalent. In this unit we may talk interchangeably about carbon emissions, carbon dioxide emissions and CO₂ emissions.



Carbon footprints may also include other gases that contribute to global climate change – the so called 'greenhouse gases' (GHGs). The most common of these is methane (CH₄), but they also include nitrous oxide, hydro fluorocarbons, per fluorocarbons and sulphur hexafluoride (SF₆). These other gases tend to be produced from agriculture or industrial processes. Most are much more powerful contributors to global warming than CO₂. Water vapour (H₂O) is also a significant contributor to global warming but, as its concentration varies little with time, it is not considered to be an anthropogenic greenhouse gas, except from aircraft vapour trail. However, the largest contributor to global warming is carbon dioxide itself, which is produced from burning fossil fuels such as coal, oil or gas. As well as the direct use of fossil fuels, people's carbon footprints normally include the use of electricity (where CO₂ is emitted at the power station) and as a result of collective travel, such as on trains, buses and aircraft.

Observation:

G) Emission of CO₂ through transport system

- No. of transport vehicles owned/hired by institute for convince for faculty/students?
8 Bus, 2-50 seat / 6-40 seat
- No. of vehicles in campus? 400/day
(Approx/day)

Fuel type	Four Wheeler	Two Wheeler
Petrol	100	300
Gas		
Diesel		
Battery operated		

- Two wheelers/motor cycles etc.
- Does institute check PUC certificate for each vehicle. 100

Form 59
[See rules 115 (2)]

Pollution Under Control Certificate
 Authorised By :
 Government of Uttar Pradesh

Date : 23/03/2023
 Time : 16:09:28 PM
 Validity upto : 22/03/2024 ✓

Certificate SL No. : UP03700870003354
 Registration No. : UP16FTS489
 Date of Registration : 09/Oct/2018
 Month & Year of Manufacturing : Apr-2018
 Valid Mobile Number : *****9617
 Emission Norms : BHARAT STAGE IV
 Fuel : CNG ONLY
 PUC Code : UP0370087
 GSTIN :
 MIL observation : No

Vehicle Photo with Registration plate
 60 mm x 30 mm

Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	Carbon Monoxide (CO)	percentage (%)	0.3	0.25
	Hydrocarbon, (THC/HC)	ppm	200.0	121.84
High idling emissions	CO	percentage (%)	0.0	0.0
	RPM	RPM	2500 ± 200	0.0
Smoke Density	Lambda	-	1 ± 0.03	0.0
	Light absorption coefficient	1/metre		

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC operator
 60mm x 20 mm.

Institute promote use of bicycle for the campus:

In the campus some of the faculty member use bicycle and they celebrated that day as No vehicle day. Also, promotes sharing of vehicle while coming to the institute.

Institute promotes sharing of vehicle while coming to institute.

Recommendation:

1. Calculate the carbon foot print.
2. Check PUC certificate for each vehicle entering the campus.
3. Institute should carry out air and Noise monitoring.
4. Research/Study/Publication/Exposure to carbon foot print to be created and motivated.



E.WASTE MANAGEMENT:

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair, and reuse. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus. The different solid wastes collected as mentioned above.

Observation:

For Plastic and waste generated in the college there is a provision to dispose the same with waste collection vehicle of corporation on daily basis under the swatch Bharat Abhyaan. The wastage from the canteen needs to be used in the composting purpose rather than disposing it through other sources.

Also college encourages their staff and students for using the plastic bags of more than 50 micron or use clothes bags or paper bags makes with the waste paper through awareness training.



Type of waste generated

Solid Waste Management:

✓ Plastic free environment

Our campus is plastic free zone and is also creating awareness amongst the students and staff members regarding the bad effects of plastic by display boards and other programmes.

✓ Dustbins in the premises

In order to avoid the spreading of litter, all the laboratories, class rooms, cabins and corridor are provided with dust bins.

✓ Minimum use of Xerox / printing

In our college maximum data is converted to soft copies and procedures are digitalized which minimizes the use of printing papers. We also put warning stickers on each Xerox / printing machines to minimize use. Whatsapp, Messenger app and E-mail facilities are used to send the notice instead of paper print. Hence, maximum working procedures are paperless.

✓ Food/Green waste

College has not vermiculture composting facility



MEMORANDUM OF UNDERSTANDING

This MOU is executed at New Delhi on 05th Day of May 2023 between **Greater Noida Institute of Technology (Engineering Institute), Greater Noida** with its registered office at Plot No 7, Knowledge Park – II, Greater Noida, Uttar Pradesh - 201308 (as the "FIRST PARTY")

Between

Indian Pollution Control Association with its office at 3-5, DDA Shopping Complex, Hargobind Enclave, Vikas Marg Ext. Delhi - 110092 (as the "SECOND PARTY")

Whereas the First Party has approached the Second Party to undertake the project of Plastic Waste Management at its place on their behalf. The agreement is made initially for ONE year and may be extended further on mutual agreement after ONE year on revised terms and conditions (if any).

And whereas the Second Party has expressed its willingness to accept this project made by the First Party.

Now therefore it is agreed between the two parties as under:

A. The First Party will do the following jobs:

1. They will ensure segregation of plastic waste at source and they will do the collection of segregated plastic waste from different source and keep the segregated plastic waste at one common point. They will conduct awareness program on segregation of plastic waste.


 [Signature]

Approved by AICTE, Delhi & Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow
 9 Plot No. 7, Knowledge Park-II, Greater Noida, Gautam Buddh Nagar, Uttar Pradesh-201310
 ☎ 0120-2328214/15/16 | 1800 274 6969 ✉ director@gniot.net.in 🌐 www.gniot.net.in

2. They will coordinate with Second Party with respect to collection of plastic waste from common point and inform the second party at least two days in advance.

B. The Second Party will do the following jobs:

1. They will collect Plastic Waste from the common point of first party Greater Noida Institute of Technology (Engineering Institute), Greater Noida on as and when required basis.
2. They will collect the segregated plastic waste and do the further segregation as per the different categories of plastic at their cost.
3. To collect the segregated plastic waste, they will send their commercial vehicle with minimum one waste collector for loading the waste material.
4. They will be responsible for the recycling of collected plastic waste through authorized recyclers at their own cost.
5. IPCA will provide Certificate in the name of First Party (Greater Noida Institute of Technology (Engineering Institute), Greater Noida) against the quantity of plastic waste collected and recycled.

C. The First Party may purchase recycled products from the Second Party for further sale, demonstration and personal consumption as per the price list of Second Party.

D. Apart from sale/purchase of products, both the party will neither pay nor charge for the services.


 [Signature]

E. Either party can terminate this MOU by giving one month notice in writing.

ENVIRONMENTAL AND ETHICAL COMPLIANCE

IPCA shall also comply with all applicable legislation, rules, regulations or orders relating to environmental management and any internationally recognized standards or Green Partner policies for ethical environmental management. Green Partner may, where appropriate, request improvements in IPCA practices to ensure compliance with the said principle. Further, IPCA shall implement an environment management system (EMS) based on the principles of ISO 14001 standard or similar international standard. IPCA shall encourage the adoption of the principles therein by its subcontractors.

This MOU is signed at New Delhi on this 05th Day of May 2023 in the presence of the witnesses shown against each.


 (FIRST PARTY)

Greater Noida Institute of Technology
 (Engineering Institute)
 Greater Noida

Witness: [Signature]


 (SECOND PARTY)

Indian Pollution Control Association
 New Delhi

Witness: [Signature]

Liquid waste Management:

The entire sewage water from the campus is directed to soak pit and is subjected to disposal.

The hazardous chemicals used routinely for conducting experiments in the laboratories are handled and disposed with care. These chemicals are incinerated and disposed in a pit.

E-waste:

E-waste can be described as consumer and business electronic equipment that is near or at the end of its useful life. This makes up about 5% of all municipal solid waste worldwide but is much more hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

- E-waste is the future coming environmental problem will create hazards to our environment, it is non-degradable waste can pollute water, soil and air.
- With keeping this view we are aware students and all staff about hazards effect of the e-waste on the health of man and ecosystem destruction, Waste material mainly metal, insulating materials present in the e-waste like CD, scrap mobile like devices, computer waste like monitor, CPU, mouse, Key board, cable and unused pen drive etc. are coated and deposited in scientific method.

Observation:

E-waste generated in the campus is very less in quantity. The cartridges of laser printers are refilled outside the college campus. Administration conducts the awareness programme regarding E-waste Management with the help of various departments. The E- waste and defective item from computer laboratory is being stored properly. The institution has decided to contact approved E-waste management and disposal facility in order to dispose E-waste in scientific manner.

C) Waste Management:

- Type of waste generated: Solid, Liquid, E-waste - *solid*

- Do you measure the waste collected quantity?
No

.....

Total solid waste collected in the college?

- Do you have system to segregate the waste in various dustbins?

- Do you have any method for disposing waste:
Yes, Dry and Wet collected separately

Waste	Quantity Generated/Day	Method of treatment before disposal	Method of disposal
1. Plastic Waste			
2. Hazard Waste			
3. Wooden Waste			
4. Metal Waste			
5. Food Waste			
✓ 6. E-Waste			
7. Batteries			
8. Lab waste - Biological - Chemical			

- Do you have vermiculture composting? if yes, give total area allotted.
No

- Do you have any contract with external agency to handle e-Waste, hazards waste?
Yes

- How you dispose off e-waste and hazard waste, batteries?
Yes

- Do you have system of generation of biogas from waste?
No

Waste collection and disposal:

E-Waste materials are kept in a separate store-room with a dead stock register. Drives, Monitors, Keyboards, Cartridges, etc. is disposed through outside agencies as a scrap. UPS batteries are recharged/repaired/exchanged by the suppliers. The cartridge of laser printers is refilled outside the college campus.

System to segregate the waste in various dustbins established. The segregated plastic waste and waste from college canteen is collected in a separate container and handover to scrap vendor.

Recommendations:

The management of college can consider the following recommendations on top priority:-

1. Lab waste to be pretreated prior to disposal as per state pollution board guidelines before disposal. Lab waste to be treated through ETP/STP or to be collected at single point and handed over to municipal corporation/regulatory approved agency.

2. The solid waste generated in the collage premises to be collected in scrap Yard or any identified place or in computer room (Notified Area) and segregated as per the category of solid waste management with proper well labeled.
3. Plastic waste registered vender(with whom MOU is made) with State Pollution Control Board as per “The Plastics Manufacture, sale and Usage Rules, 1999 and all its Amendments, legal license of same to be ensured.
4. Hazardous Waste to be disposed by identified disposal pathway within 90 days from its generation as per the guidelines of “Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008 with all the Amendments.
5. Metal Waste to be reused in the college and workshop department shall be engaged for it, if they prove that the waste cannot be reused will be sale out to the venders who will recycle and reuse the same.
6. Unused food waste to be used as cattle feed or for vermicomposting. College has to ensure vermin-culture composting facility
7. Non- Biodegradable waste shall be disposed to the registered vender with State Pollution Control Board
8. Biodegradable waste to be compost in the college premises in technical manner, it is observed that the vermin culture pans are present in the college but in technical institute it is expected that the composting shall be done in perfect technical manner.
9. Municipal Solid Waste to be disposed as per the guidelines “The Municipal Solid Wastes (Management and Handling) Rules, 2000 with its all Amendments.
10. The replaced or used batteries which could not be recharged as the life get exhausted shall be disposed as per the guidelines of “The Batteries (Management and Handling) Rules, 2001 and all its Amendments. It is also good to replace the old battery with new one.
11. The E-Waste Produced in the collage to be disposed off as per the guidelines in “E-Waste Management and Handling Rules, 2011 and all its Amendments.

Waste disposal Activity guidelines:

- a. With keeping view to minimize the pollution created through the e-waste, we have carried out the scientific disposal of e-waste by two ways
 - i. Collection of e- wastes in e- waste and handover to municipal corporation/authorized agency for disposal.
 - ii. Reuse of the component of unused electronic devices in laboratory viz. Physics.
- b. Recycle or safely dispose of white goods, computers and electrical appliances.

- c. Use reusable resources and containers and avoid unnecessary packaging where possible.
- d. The records of proper disposal of all solid wastes to be maintained with its manifests at one central place.

F. ENVIRONMENT CONSCIOUSNESS:

Awareness building amongst staff, student and society evident. Various trainings and initiatives conducted.



Considering the fact that the institution is has significant environmental research both by faculty and students. The environmental awareness initiatives are substantial. The installation of solar panels and rain water harvesting system are note worthy. Besides, environmental awareness programmes initiated by the administration shows how the campus is going green. Few recommendations are added to curb the menace of waste management using eco-friendly and scientific techniques. This may lead to the prosperous future in context of Green Campus & thus sustainable environment and community development. As part of green audit of campus, we carried out the environmental monitoring of campus including Illumination and Ventilation of the class room. It was observed that Illumination and Ventilation is adequate considering natural light.

Botanical garden is nicely developed.

Training program related to green audit conducted:

The green audit committee will act as per the environmental policy and shoulder the responsibility of maintaining and protecting environment surrounding the college. The aim of the committee is to provide advice for the development of environmental policy and practices in the areas of...

- Waste management.
- Soil management.
- Biodiversity and threatened species preservation.
- Energy use and conservation.
- Eco-friendly techniques.
- Noise pollution.
- Air pollution.
- Paperless operating procedures.
- To create a healthier, tobacco-free campus.
- To maintain plastic free College campus.

RECOMMENDATIONS:

- Environmental advisory committee could be formed. The discussions/ information sharing among different departments can generate lot of ideas and awareness on green issues.
- Maintain minutes of meetings of environmental committees; evaluate the effectiveness of various environmental programs conducted by the institutes. Set annual targets for Green Initiatives & monitor them closely. Create 'Green Champions'.
- Since student uses computer lab, the screen savers can be set up for creating environmental awareness. Short 30 second pop up can be displayed on computer screens when they are on standby mode. Or wallpapers informing students about environment conservation can be created.
- Consider detailed environment audit and water audit.
- Small composting facility can be provided to treat the biodegradable waste. Compost generated can be utilized for plants near compound wall.
- Vertical gardening can be done using indoor plants. Hydroponic garden can be an option where in small space also plants can be planted.
- Indoor air quality can be monitored to ensure safe and healthy environment.
- New green spots should be developed.

- Wild and locally important more plant species are to be planted in campus.
- Gymnospermic and palm plants should be planted in the campus.

OVERALL RECOMMENDATIONS:

- Putting up notices in all washrooms and near all water coolers about the need for saving water, and simple tips like ensuring all the taps are properly closed.
- To eliminate the spillage and over usage of water in washbasins, urinals and toiler push taps are highly recommended.
- Training to the cleaners in economical use of water for cleaning purposes and a system in place for immediate response when issues of water leakage are observed so that water losses are prevented.
- Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged.
- Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration (Drinking Water) process and ensure that the equipment's used for such usage are regularly serviced and the waste water from RO to be used for some useable purpose.
- Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.
- All water taps to be checked for its leakage particularly in toilet (Hostels).
- Identification of areas to be carried out such as compost making area, water harvesting tank, bore well used for water harvesting purpose, bore well used for consumable purpose, parking area of staff, students, hazard area etc.
- Water meter to be installed on bore well as well as usage and daily monitoring record of water to be maintained.
- Water to be tested from various sources including the potable water purifiers and in canteen.
- Special Internal Water Audit to be conducted quarterly and should be submitted to environment committee.
- Environmental policy to be displayed at prominent locations.
- Environmental objectives to be set in measurable form and to be displayed at prominent location.
- All electrical loose wire to be dressed up properly.
- Electrical Earthing of the college to be checked regularly.

- Awareness for the use of electricity and paper to be developed in the college.
- Use of Diesel generator to be avoided (to reduce the consumption of oil, record of consumption of diesel to be maintained).
- Enhanced renewable energy source capacity.
- Carbon Sequestration study shall be carried out before plantation of Green Belt.
- Environmental data to be displayed at prominent place. These are
 - No of plantation done last year.
 - Electricity produced through renewable energy source (Solar).
 - Save electricity bill last year etc.
- Process of E waste to be defined and displayed (for all the E-Waste generated in the college).
- Room used for storing E-waste to be identified.
- E-waste generated at different departments other than the computer and its accessories needs to define the sections where these can be stored.
- Separate identified bins for E-Waste to be placed in hostels and other identified places.
- Waste collected bins for wet and dry waste to be made available and place in college to be defined.
- Cleanliness in college to be improved.
- Chemistry lab and other lab waste (chemical) to be neutralized before drained in to a waste pit.
- Composting area to be properly identified.
- Plan for green belt development to be prepared. (Including college and other area of town as CSIR activity)
- Drinking water analysis shall be done as per IS 10500.
- Air quality to be checked for SO_x, NO_x, PM_{2.5}, PM₁₀ etc.
- Monitoring of noise level to be done.
- Ensure that all the vehicles entering into the college has Valid PUC.
- Installation of Effluent treatment plant (ETP) or other method of effluent treatment method to be explored.
- Disposal of sanitary napkins / incinerator as per the latest guidelines under solid waste disposal. (As Sanitary pad disposal bags mandatory from January 2021) to be provided
- Tree plantation shall be done to maintain biodiversity as well as artificial nesting shall be installed. Area for plantation.
- Plantation to be done with proper plan and by identifying the locations.
- Proper parking place with identification to be provided.

- Environment day to be celebrated on 5th June.

Water & Wastewater

- Recycle water, particularly for uses with less-critical quality requirements.
- Recycle water, especially if sewer costs are based on water consumption.
- Balance closed systems to minimize flows and reduce pump power requirements.
- Eliminate once-through cooling with water.
- Use the least expensive type of water that will satisfy the requirement.
- Fix water leaks.
- Test for underground water leaks. (It's easy to do over a holiday shutdown.)
- Check water overflow pipes for proper operating level.
- Automate blow down to minimize it.
- Provide proper tools for wash down -- especially self-closing nozzles.
- Install efficient irrigation.
- Reduce flows at water sampling stations.
- Eliminate continuous overflow at water tanks.
- Promptly repair leaking toilets and faucets.
- Use water restrictors on faucets, showers, etc.
- Use self-closing type faucets in restrooms.
- Use the lowest possible hot water temperature.
- Use multiple, distributed, small water heaters to minimize thermal losses in large piping systems.
- Verify the water meter readings. (You'd be amazed how long a meter reading can be estimated after the meter breaks or the meter pit fills with water!)
- Verify the sewer flows if the sewer bills are based on them



SQMS Credentials

- a. SQMS is ISO 9001, ISO 14001, ISO 45001, ISO 50001 certified
- b. SQMS had been accredited by CDC, Govt. of India
- c. SQMS had been accredited by Lab Consultancy Organization

SQMS has provided training, consultancy and audits of more than 200 organizations for ISO 9001, ISO 14001, ISO 45001, ISO 50001, ISO17025, Green/Environment/Energy

Following members of SQMS are involved in conducting Green/Environment/Energy audits.

- a. Dr. Ramesh Lakhe : QCI registered LA for QMS, EMS, OHSAS; LA for QMS, EMS, OHSAS, EnMS, NBQP QCI registered QMS, LMS and business improvement with 35+ years of experience.
- b. Mr. Nasir Sayyad: BEE energy auditor, ISO 50001 LA, ISO 9001,14001,45001,50001 Internal auditor with 40+years of experience
- c. Mr. M.M.Naveed: ISO 50001 & 22001 LA and ISO 9001,14001,45001,50001 Internal auditor with 20+years of experience
- d. Kranti Dharkar: ISO 9001,14001,45001,50001 transition Lead/Internal auditor with 14+ years of experience