

GREEN AUDIT

STUDY PERIOD (TWO YEARS) 2021 - 2022 & 2022 - 2023

Sustainability study
AUDIT REPORT

Studied for
**Sree Narayana Guru
College of Commerce**

P. L. Lokhande Marg,
Chembur (West), Mumbai - 400089,
Maharashtra, India

Studied in the capacity of
**Accredited and Certified
Green Building Professional**



Website: <https://thegreenviosolutions.co.in/>

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Valid till **August 2024**

Background reference image Sasin Tipchai on unsplash

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO IA (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: Green audit Energy audit Environment audit

Institute: Sree Narayana Guru College Commerce Date: 15-07-2023

Document objective: Inferences of the Site visit

Observations (Positive aspects)	Suggestions (Improvement aspects)
Green Audit	
- Dedicated water supply in pit area is available	- Water management through storage, equipment - Waste management area should be redeveloped
Energy Audit	
- An 100% LED [Energy-efficient appliances] campus.	- Alternate sources of energy need to be explored.
Environment Audit	
- Good green cover in area available	- Ecological in campus beautification can be undertaken.



Signature & round seal
Name:
Designation:
For the said Institute



Signature & round seal
Name: Mrs. F. A. Shaikh
Designation: Project Coordinator
For The Greenvio Solutions



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Document objective: Proof of the Site visit



Meeting with the core team



Investigation of the systems



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Designation: Project Coordinator
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Disclaimer

The Audit Team has prepared this report for the **Sree Narayana Guru College of Commerce** located at *P. L. Lokhande Marg, Chembur (West), Mumbai - 400089, Maharashtra, India* based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the internal team. The warranty or undertaking, expressed 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.

The audit is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

Greenvio Solutions

Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

Sustainable Academe is our department for conducting Audits

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Acknowledgement

The Audit Assessment Team extends its appreciation to the **Sree Narayana Guru College of Commerce, Maharashtra** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended to everyone from the Management.

Our heartfelt thanks are extended to Chairperson of entire process **Dr. Ravindran Karathadi**, (Principal) for the valuable inputs.

We are also thankful to Institute's Task force who have played a major role in data collection.

- ⇒ **Faculty members** – *Dr. Jayasree V., Vice Principal (Administration); Dr. Hinduja S. P., Vice Principal (Academics) and the Assistant Professors - Mr. Mohd. Jabir, Ms. Naveena Suresh, Mr. Iyer.*
- ⇒ **Admin staff members (Accountants)** – *Ms.Nalini Shelke and Mr. Pravin*

We appreciate the cooperation of the **entire Teaching, Non-teaching, and Admin staff** for their support while collecting the data.

Sustainable Academe

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

Contents

Disclaimer	1
Acknowledgement	2
Contents.....	3
1. Introduction.....	4
2. Overview	5
3. Assessment	6
4. Investigation	7
5. Documentation	8
6. Suggestions	14
7. Compilation.....	16

1. Introduction

1.1 Statements of the Institution

1.1.1 Vision

The College proposes "Empowerment through Higher Education to all strata of Society"

1.1.2 Mission

The College adheres and focuses "Quality education to all irrespective of caste, creed, socio-economic status and uplift the poor and downtrodden".

1.1.3 Objective

It is the objective of the College:

- Maintain good academic standards through innovative and effective teaching, learning methods.
- Focus on learner-centric teaching to make learning a happy, joyful and fruitful experience.
- Sensitize students on vital social issues raging across the globe and guide them to emerge as socially responsible citizens of the nation.
- Motivate students to achieve discipline, self-mastery and professionalism.
- Enable students to meet the needs, demands and challenges ahead and excel in life.
- To aim at all round development of students and groom their talents through meaningful co-curricular, extracurricular activities with an emphasis on integrity and ethics.
- To have a positive approach towards development and progress of youth, highlight their inherent powers and inspire them to realize their full potential.

2. Overview

2.1 Summarised Populace analysis for 2022-2023

2.1.1 Students data

The data (shared by the Institute) shows there were a total of **1,022 male and 937 female students.**

2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	07	03	10
2	Teaching staff	08	24	32
3	Non-Teaching staff	06	04	10
Total Staff Members		21	31	52

Table 1: Staff data of the Institution for 2022-2023

The staff data shows the Institute premises had a total of **52 Staff Members.**

2.2 Summarised Populace analysis for 2021-2022

2.2.1 Students data

The data (shared by the Institute) shows there were a total of **991 male and 904 female students.**

2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	07	03	10
2	Teaching staff	06	24	30
3	Non-Teaching staff	08	08	16
Total Staff Members		21	35	56

Table 2: Staff data of the Institution for 2021-2022

The staff data shows the Institute premises had a total of **56 Staff Members.**

3. Assessment

3.1 Affiliation

The Institute is affiliated to **University of Mumbai**, one of the premier universities in India, is positioned in the city of Mumbai city and the state of Maharashtra.

3.2 Certification

The College has received the code under **All India Survey of Higher Education (AISHE)** wherein the code is C-33899.

3.3 Accreditation

The following are details of the accreditation awarded by the National Assessment & Accreditation Council (NAAC) to the College.

Cycle	First	Second
CGPA	81.60	3.08
Grade	B++	A
Year	2004	2012

Table 3: NAAC Accreditation details of the Institute

The College is due to enter its Third cycle of NAAC.

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
 Accredited & Certified Green Building Professional, ISO IA (IMS)
 Audit objective: Green Building up gradation of the premises

Audits covered: Green audit Energy audit Environment audit

Institute: See Narayana Guru College Commerce Date: 15-07-2023

Document objective: Exit Meeting attendance sheet

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
	Dr. Jayasree V	Internal	Vice-principal (Admin)	
	Dr. S.P Hinduja	Internal	Vice-principal (Acadmic)	
	Mrs. Naveena suresh	Internal	Criterion Head	
	Mr. Jabir M	Internal	Criterion Member	
	Mr. Iyer p.v	Internal	Criterion Member	



Signature & round seal
 Name:
 Designation:
For the said Institute



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 Name: Mrs. F. A. Shaikh
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4. Investigation

4.1 Scope for improvement aspects

⇒ Water tanks in all areas

- a. Include the information about size, capacity and usage
- b. Paint the tank in light blue colour
- c. Add signboards about the usage such as 'Drinking' or 'Secondary'
- d. Add signboard and map about the process/ system in practice

⇒ General aspects (Indoors areas)

- a. Zoning of the site w.r.t. space wise analysis
- b. Signboards, signages, information and display boards at relevant locations.

⇒ Library in the Campus

- a. Include silence board at various locations and at entrance.
- b. Install book drop box system at the entrance of the library.
- c. Upgrade smart scanning system for every book
- d. Include a self service station for digitalization.

5. Documentation

5.1 Green Practices Audit

The increasing global warming and climate change have made us realise that apart from the enormous strategies the individual small efforts need to be taken by individuals and Educational Institutes as the younger generations are the future of the world and once they are taught about these practices only then can we assume a better future.

5.1.1 Green practices

We observed the following points during the Site investigation and data verification of the premises; these are common for all the Buildings on the premises.

- ⇒ **Social awareness** - *The College has taken up awareness drives on various social issues for rural upliftment and regeneration in the college and surrounding villages.*
- ⇒ **Cleanliness Campaign** - *The Swachha Bharat Abhiyan is carried out on college premises as well as off-premises.*
- ⇒ **Silent and peaceful atmosphere** – *The College is located amidst residential areas which are well designed thus these help to maintain the pollution under control and provide a healthy ambience.*
- ⇒ **Team work** – *The best quality of the College which sets it apart from other institutes is its coordinating and cooperative staff members, as for a building the foundation plays the most important role for its future similarly for an educational institute its staff members do.*
- ⇒ **Documentation of all the events** – *The best part about the College is the prompt and professional response, this was observed not only in the way the Team responded throughout the project but also through the documented data submitted be it the cleanliness report or the eco club activities report; each of these were documented and presented in a sophisticated manner which is highly appreciating.*

5.1.2 Community development

The details of the **environmental activities** conducted as part of the extension initiatives by the Institute are documented below:

Date	Type of activities	Mode	Place
04-03-2021	Importance of personal & Public Hygiene in India organized by Deshpande College, Mulund	Virtual Events	Online via YouTube App
06-06-2021	Awareness of World Environment Day through Social Platforms-Media	Virtual Events	Social Media-Platforms
06-06-2021	Tree Plantation Activity on World Environment Day	Physical Events	SNGC College, Chembur & Mahul Gav, Vashi Naka
05-10-2021	Cleaning and Sanitation at College NSS Cabin	Physical Events	SNGC College, Chembur
06-10-2021	Day 1 Plastic Bottle Collection from College and Nearby Places	Physical Events	SNGC College & Chembur
07-10-2021	Day 2 Plastic Bottle Collection from College and Nearby Places	Physical Events	SNGC College & Chembur
08-10-2021	Day 3 Plastic Bottle Collection from College and Nearby Places	Physical Events	SNGC College & Chembur
09-10-2021	Day 4 Plastic Bottle Collection from College and Nearby Places	Physical Events	SNGC College & Chembur
11-10-2021	Day 5 Plastic Bottle Collection from College and Nearby Places	Physical Events	SNGC College, Chembur
18-10-2021	Day 6 Plastic Bottle Collection at Shivaji Nagar Adopted Area.	Physical Events	Shivaji Nagar, Govandi
19-10-2021	Day 7 Plastic Bottle Collection at Shivaji Nagar Adopted Area.	Physical Events	Shivaji Nagar, Govandi
27-10-2021	Day 9 Plastic Bottle Collection at college Premises.	Physical Events	SNGC College, Chembur
28-10-2021	Day 10 Plastic Bottle Collection at	Physical	Shivaji Nagar, Govandi

	Shivaji Nagar Adopted Area.	Events	
29-10-2021	Day 11 Plastic Bottle Collection at Shivaji Nagar Adopted Area.	Physical Events	Shivaji Nagar, Govandi
10-11-2021	Donated 23 kgs of Plastic Bottles to Stree Mukti Sanghatna	Physical Events	SNGC College, Chembur
29-11-2021	Cleaning and Sanitation at College NSS Cabin	Physical Events	SNGC College, Chembur
10-02-2022	Pre-Camp visit at Done village, River cleaning and plastic collection drive at the village river.	Physical Events	Done village, vangini
20-02-2022	Streetplay practice on swachh bhara Abhiyan	Physical Events	SNGC College , Chembur
29-03-2022	street play performance	Physical Events	VPM College
17-09-2022	Participating in beach cleaning drive which is conducted by "My Green Society"	Offline	WORLI SEAFACE GAEDEN
02-10-2022	Participating in Monorail cleanliness drive	Offline	Chembur monorail station

Table 4: Details of the environmental initiatives undertaken by Institute

5.2 Waste Audit

Waste is an inevitable part of our lives. Over the years the awareness about waste management techniques has given a rise to rethink how the waste can be avoided being sent to the landfills. The audit provides an approximation of the types of waste generated, location of waste collections, disposal techniques used, waste segregation methodologies adopted, and waste management strategies that are implemented in addition to the newer ways that can be adopted aiming to make the premise clean and sustainable.

5.2.1 Waste produced

S. No.	Type of waste	Source	Current Disposal	Can be retreated?	Methodology
1	Solid waste	Toilets–Biodegradable waste	Soak pit connected for solid-liquid waste management	Yes	TREATED – Biogas plant can be initiated
2	Liquid waste	Toilets, washbasins		Yes	TREATED - Sewage treatment plant can be initiated
3	Paper waste	Newspaper and other paper	Given to vendor	Yes	TREATED – A recycling plant can be initiated
4	E-waste	Computers - Non-biodegradable waste		Yes	CONTINUE with the current practice
5	Plastic waste	Bottles, wrappers		Yes	
6	Dry waste in form of leaves	Open space & plantations, papers - Non biodegradable waste	TREATED – Dedicated zone where vermin-composting is undertaken	Yes	CONTINUE with the current practice
7	Organic regular waste	Dust, dirt dust waste from indoor spaces			
8	Bio-waste	Sanitary waste	Vending machine is available	Yes	Tie-up with local government for dedicated bio-waste handover

Table 5: Details of the waste management practices adopted by the team

5.3 Water Audit

Water is one of the basic needs. Pure drinking water is a resource that needs to be preserved efficiently. A water audit helps to identify the sources of water consumption, and the water requirement by the premises is met by these sources. The effective usage of water without any wastage should be a mandatory practice. Understanding the techniques as per site context to increase water conservation in terms of awareness and practice can be identified and executed as part of this exercise.

5.3.1 Water availability and consumption

5.3.1.1 Source of Primary water supply

The Institute requires water from the Local Municipality for drinking water purposes. There are dedicated water tanks as overhead tank facilities available in the premises.

5.3.1.2 Source of Secondary water supply

The Institute uses the following sources of water supply for secondary usages such as watering plants, kitchen, toilets, and wash basins and other spaces. There are 2 bore wells available at present.

5.3.1.3 Source of Tertiary water supply

The tertiary source of water is the source of water harvesting. *The team has suggested connecting the overflow pipe to the bore well for ground water recharging.*

5.3.1.4 Source of Reusing waste water

This initiative is not practiced at present. Since the campus is located in SHARED premises, the system is not an urgent requirement.

5.3.2 Areas of water usage

Based on the inventory done and data shared by the staff it was found that the premise has the facilities such as water cooler, toilets, washbasins etc.

5.4 Health and Hygiene Audit

The hygiene is a part and parcel of our daily life. It is extremely essential to keep the surroundings clean in the same manner as we would want our houses to be.

Educational Institutes have a bigger role to play in order to affect the young minds in the positive manner through better hygienic practices.

5.4.1 Facilities available

The Institution has washroom facility, hand wash, drinking water and dustbin facilities.

5.4.2 Hygiene aspects

The team should undertake steps to upgrade the hygiene areas of the site as per the instructions and discussion.

DETAILED REPORT

6. Suggestions

Section-wise suggestions related to premises

The following suggestions are to be considered as a ***first priority*** for implementation. These **should be executed within the next 2.5 years from the date of the Report submission**. The Institute can execute a plan after discussion with Project Head.

6.1 Green practices Audit

- ➔ **Plant as a gift** - As a kind gesture, the guests visiting the premise can be asked to plant a small plant on the premise itself and they can be even given plants/bouquets from the flowers of the plants on the premise as a gift.
- ➔ **Environmental awareness** - There can be various slogans in local and national language on the compound wall giving the message of saving the environment through the joint efforts of the students and staff thereby making the student socially and environmentally responsible citizens.
- ➔ **Tree adoption scheme in the premises** - The Institute can adopt the One Faculty – One tree adoption scheme; this can be practiced on occasions such as toppers meet, guest sapling plantations, specific zoning of the tree adoption area. this can be very beneficial, especially during the summer season.
- ➔ **No vehicle day** - Once in a while, a No vehicle day can be adopted by students and staff to promote the use of eco-friendly vehicles on the premise.
- ➔ **Undertake environment study of local areas** – This aspect is w.r.t. environmental parameters and submits the same to local municipality for further up gradations.
- ➔ **Increase the organic farming practices** - The premises can have an organic farming facility in terms of farms, kitchen, terrace gardens the produce can be directly utilised in the premises.

6.2 Waste Audit

- ➔ **Signages** - Messages about avoiding wastage should be placed at appropriate locations.
- ➔ **Material of dustbin** - The plastic dustbins should be replaced with eco-friendly material.
- ➔ **Documentation** – Improve and increase the documentation and visibility/ reflectance of the environment related events on the website, social media handles
- ➔ **Cutlery in the Canteen** – The regular plastic and steel plates, spoons used in Canteen can be replaced with eco-friendly and organic leaves, paper straw, disposable plates, edible spoons and tables made out of sugarcane waste or bamboo. This will be first of its kind initiative to be adopted and practiced thus also inculcating the healthy practices in students.

6.3 Water Audit

- ➔ **Waterless urinals** - There can be the provision of waterless urinals as a Green Building initiative in the premise, either the existing ones can be replaced with such a facility or new toilets can be constructed in this manner.
- ➔ **Rain water bunds** – There should be landscape beautification project undertaken to appropriate channelize the rain water through bunds and similar facilities.

6.4 Health and Hygiene Audit

- ➔ **Health related provisions** – There should be provisions for a dedicated health centre and 24x7 available ambulance services inside the premises.
- ➔ **Signboards** – The Institute should have multiple signboards about 'No smoking' and 'Healthy premises' at every nook and corner of the Institute.
- ➔ **Compound wall** – The compound wall should have awareness messages about 'No Smoking' and 'No Tobacco'
- ➔ **Toilet hygiene** – There should be facilities such as potpourri, camphor tablets in the toilet to avoid smell and health related issues.

On-site investigation and physical verification
Audit Team during the visit and other photos collected during data documentation



Evidence of the visit - Investigation of the compost and waste management areas



Evidence of the visit – Water sampling testing and outdoor study



Investigative parameters – Site Aspects – Campus extent and facilities available in the premises



Investigative parameters – Site Aspects – Terrace study to understand waterproofing and cooling study

7. Compilation

The study is based on the data collected, analysed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyse and study the data collected.

- ➔ Uniform Plumbing Code – India, 2008
- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013
- ➔ BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada
- ➔ Used only for understanding Universal design - Universal Accessibility Guidelines for Pedestrian, Non-motorized vehicle and Public Transport Infrastructure – Report guidelines by Samarthyam (National center for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation and www.umassd.edu
- ➔ The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- ➔ Images on site by Coordinators of the both teams
- ➔ Icon images used by <https://www.vecteezy.com/free-vector/security-camera-icon> and <https://www.vecteezy.com/free-vector/electric-car-icon>

