



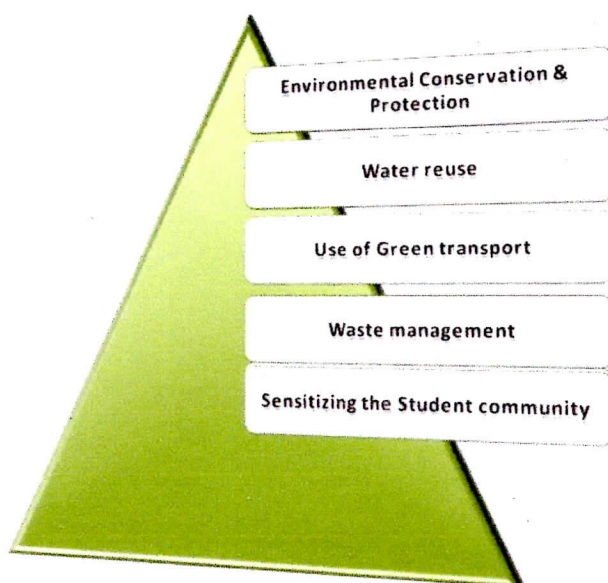
# NEHRU ARTS AND SCIENCE COLLEGE

(AUTONOMOUS)

(Affiliated to Bharathiar University Accredited with "A" Grade by NAAC)  
Nehru Gardens, Thirumalayampalayam, Coimbatore - 641 105, Tamil Nadu.  
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## Centre for Green Energy





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## CENTRE FOR GREEN ENERGY

### PREAMBLE

The institution fulfills its commitment towards a better environment. Through environmental education, students and people are taught to use the available resources in a sustainable manner such that a sensible society is built to manage the environment in the right way. The students are motivated to utilize the knowledge gained to handle the fundamental issues that lead to local pollution and environmental related hazards.

The institution has formulated effective policies that helps prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

*Mission*

A clean, healthy, and well protected environment supporting a sustainable society

\*To empower the student community to protect and conserve the environment as a valuable asset

\* To pass on a prosperous planet for future generations

*Mission*

*Objectives*

\* To sensitize and indulge students in greening initiatives outside as well as inside the campus

\* To motivate the student community towards the protection and conservation through field-oriented activities



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## MEMBERS

**Chairperson: Dr. B. Anirudhan, Principal**

**Director: Dr. O. S. Nimmi, Assistant Professor, Department of Biotechnology**

S. No.	Name of the Unit	Name of the Faculty Coordinator	Department
1.	Rain water Conservation	Dr. R. Kasimani	Microbiology
2.	Solar energy and Solar vehicles	Mr. Tony Dhiwakhar	Physics
3.	Biogas Unit and Solid waste Management	Dr. Vinoth Kumar	Microbiology
4.	Ornithology Club	Dr. M. Dhanalakshmi, Ms. Merlin Jenefer K	Biotechnology MSW
5.	International Eco Club	Dr. K. E. Vivekanandan	Microbiology
6.	Eco-Club	Dr. E. Vijaya Gowri	Biotechnology
7.	Herbal Garden	Dr. O.S. Nimmi Dr. M. Thangavel	Biotechnology Microbiology
8.	Green Audit	Dr. N. Saranya	Biotechnology



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## Overview of the Centre

The Centre for Green Energy & Environment after its establishment in 2019 has successfully implemented various green initiatives in campus. As a part of the initiative herbal garden has been set up which now is a house for more than 150 medicinal plants. These plants have been taxonomically authenticated. To support the herbal garden a vermicompost unit also functions in the vicinity. The unit also supports a mushroom cultivation unit which also offers hands on training to the in-house and outside students. Green campus activities are rampant through Mission Clean campus programmes with the involvement of every department faculty member as well as the students to make the campus a clean and a plastic free zone. Maximum plant waste utilization for organic composting is made available by this initiative. Mission Clean City is also undertaken in public places such as Government Hospitals, Railway Stations and District Collectorate. International Eco Club Student Chapter has been established in the college by the Nature Science Foundation (NSF) and Student coordinators and members from various departments have been inducted into the club. The College collaborates with NSF and jointly conducts National and International Webinars, Seminars and workshops for the College as well as the Public such as International Day for Biological Diversity, National Energy Conservation, Initiatives to make the Campus Eco-friendly, Diverse Opportunities for Youth in Technology Driven Farming, etc., deliberated by eminent speakers. Student Members voluntarily participates in various greening initiatives to create awareness among fellow students to promote, offer a sustainable solution for a safer environment. Several activities are conducted such as planting of saplings during special occasions and conducting awareness programs during importance days of celebration such as Earth Day, World Environment Day, World Soil Day and World Population Day to create awareness programs to students, faculty members, and public. Our institution has been recognized as an eco-friendly campus and certified with ISO 14001: 2004. The Centre has implemented a Rapid Forest Afforestation programme using Miyawaki Method and has received an Appreciation Certificate for actively taking part in establishing the new programme. Under the banner of Eco Recharge Project, a drive was carried out to identify, revive and further improve the campus environment. The unutilized land has been transformed into a horticulture garden with a modern drip irrigation facility. Various curriculum based EVS projects are carried out by the



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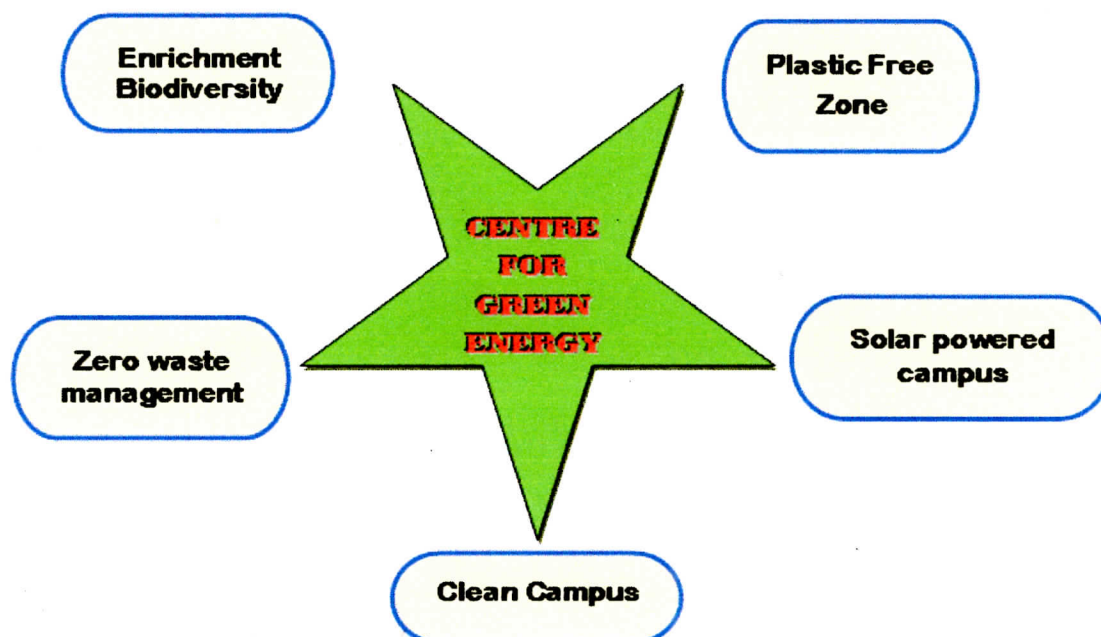
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student groups to make a thorough analysis of the ecosystem and towards its improvement. They are given an insight into the various opportunities in the field of agriculture. The Institution also collaborates with High-Tech agricultural farms that adopts smart farming technologies like hydroponics which is a doorway to attract the students and help them to explore immense opportunities for student entrepreneurship, and undertaking research/ class projects, etc. Futuristic plan is underway for the Modernization of Herbal Garden that will support a Hydroponics model system, a Herbarium, a Herbal Plants micropropagation and Promotion Division through plant tissue Culture Techniques, Organic Pesticides formulation Division.

## FOCUS OF THE CENTRE

The centre for Green Energy implements green initiatives for a sustainable environment.





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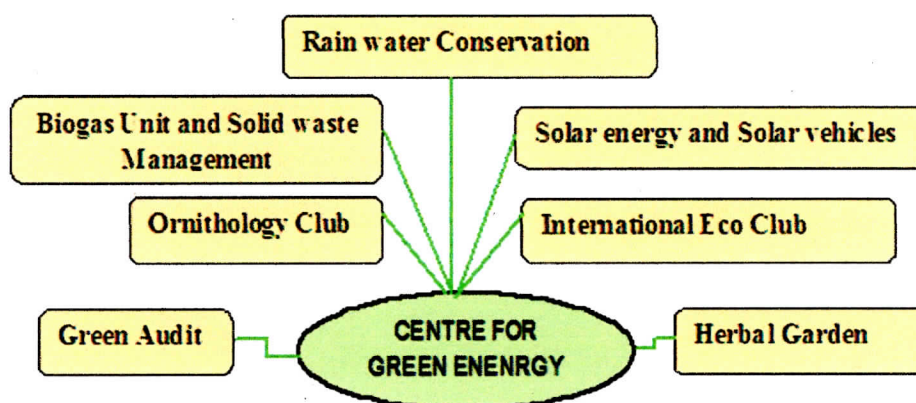


## Green Energy Programmes

The Centre for Green Energy involves students in the greening initiatives to achieve a green and safe environment. The College collaborates with different organizations such as NSF (Nature Science Foundation, an NGO organization) and jointly conducts National and International Webinars, Seminars. The Centre commemorates important days such as Earth Day, World Environment Day, World Soil Day and World Population Day through various activities to create awareness programs to students, faculty members, and public.

## Unit/Club/ Under Centre

The Centre plans and executes the activities through different units under the centre.



## Solar energy and Solar vehicle

The objective of the solar energy and solar vehicle unit is to empower the student community with basic fundamental knowledge to protect and rebuild the green earth atmosphere. Energy saving technologies is adopted and the campus is installed with street lights which are run on solar energy and LED lamps. Solar energy is radiant light and heat from the Sun that is



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harnessed using a range of ever-evolving technologies such as solar heating, photovoltaics, solar thermal energy, solar architecture, molten salt power plants and artificial photosynthesis.

The unit has conducted 3 webinars to enrich the young mind and create awareness on the basic fundamentals of energy conservation and the mechanism behind this phenomenon, on the importance of hydrogen fuel in future. Through these events students gain knowledge on power saving, solar cell working, solar cell & battery maintenance, hydrogen splitting and how hydrogen can be effectively used for fuel. Solar energy and solar vehicle is very important for young generation to protect the earth. In future the unit plans to conduct various workshops for students on solar cell and solar vehicle assembling and introduce solar powered vehicles in the campus.

## **The Ornithology Club**

The Ornithology Club has taken steps to improve the habitat in college to attract more diverse bird species. The Ornithology Club also has taken steps to improve the avian population in the campus by installing feeders, waterers, and nesting boxes. The main role of Ornithology Club is to educate bird biology to younger generation and create awareness about the importance of conservation in young minds. Two invited talks (One virtual and another in-campus) were conducted and deliberated by eminent ornithologists from prestigious centres such as Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore regarding the importance of Ornithology and conservation of bird species. Birding and documenting birds visiting the campus is also practiced. The Club conducts art, sketching, and nature journaling competitions for students. The Ornithology club members also go on field trips to SACON and other areas rich in avian biodiversity. The Club has laid out future plans to increase the bird diversity in the campus and the nearby community such as to involve students in landscape management for wildlife, to set up more number of bird feeders that can supply variety of food items to meet their nutritional requirements, maintain more native patches of vegetation to support not only bird species but also insects and small mammal communities, MOU with major ornithology hub like SACON whereby the Scientists can guide the student community for management of Bird Diversity, invite Bird watchers to training students to be nature lovers and bird enthusiasts.



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## Rainwater Harvesting

As a Green Campus initiative, the College has been aiming in making the campus independent of sustainable use of water. Through this initiative, a rainwater harvesting system has been installed which is facilitated with roof top harvesting and the water is collected through pipelines and is taken to the recharge pits which is present behind the campus. This harvested water helps in ground water recharge. The average rainfall in our surroundings is 152 mm. At present there are 2 Borewells and 1 Open well.

Future plan is to construct rain water harvesting in each building and recharge ground water. Rainwater harvesting and reuse of the water for the whole campus is in progress. This harvested water is planned to be used for Ladies hostel as well as to fulfill the campus requirement. This helps us to reduce dependency on bore water and make ourselves self-sustainable. It is also planned to harvest surface runoff water. This surface runoff water collected can be used for recharge of ground water.

## Biogas Plant

Waste Management of kitchen waste through Biogas plant is done efficiently NASC campus has a functioning Biogas Plant which produces 3 Kg/day of biogas from 30 to 50 Kg of organic waste generated from kitchen and canteen. Biogas production represents a fascinating process for the recovery of nutrients and renewable energy from various organic waste streams, which can be done either by aerobic fermentation or by anaerobic fermentation. To cater to the increasing requirement for biogas and fertilizer, the College campus plans to upgrade the production unit to 50 Kg to 100 Kg capacity per day for waste conversion using a cheaper and efficient technology for an efficient and sustainable waste management system.

## Green Audit

Environment (Eco) audit is quantitative and qualitative data to track air, soil and water waste, and to gain actionable insights to improve the operational performance in the atmosphere. This audit is generally used to observe the clean and green environment of an organization. The environment audit involves systematic documentation of periodic objective review by a regulated entity on available facilities, their operations and practices related to resolve the environmental





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requirements. Environment audits include personnel observation, monitoring, data collection, recording/documentation and analysis of various components in an Organization related to the environment with cordial support of the management. Environmental audits ensure that the environment is not disturbed from its balanced existence, so that it provides an eco-friendly atmosphere to the stakeholders. Similar to that of Environmental audit, Green campus audit is also a type of assessment to ensure that the Institution and Organization campus should grow a large number of trees, shrubs, herbs, lawns, climbers, twins and lianas in their campus to enrich with oxygen and assimilate more amount of carbon dioxide to provide a healthy atmosphere to the stakeholders.

## STUDENT MEMBERS- 2022-23

S.NO.	DEPARTMENT	CLASS	REG. NO.	NAME OF THE STUDENT
1.	Biochemistry	II B. Sc.	21UGBN001	ARAVINTH J
2.		II B. Sc.	21UGBN002	ARUN C
3.	Microbiology	II B. Sc.	21UGMB007	DILIP KUMAR V
4.		II B. Sc.	21UGMB015	NAVYA S
5.		II B. Sc.	21UGMB024	VARSHA V P
6.	Biotechnology	II B. Sc.	21UGBT001	ANANYA S
7.		II B. Sc.	21UGBT019	NITHEESHWARAN G
8.		I M. Sc.	22PGBT010	GAYATHRI P NAIR
9.		I M. Sc.	22PGBT011	INFANTA JEREENA

## ACTIVITIES OF THE CENTRE 2022-23

S. No.	Date of Activity	Name of the Unit	Name of the activity	Outcome of the activity	No. of Beneficiaries participated / (Students /faculty)
1.	02.03.2023	Eco-Club	Conducted workshop on Preparation of Herbarium	Awareness on the rich biodiversity found in the campus	45
2.	17.11.2022	HerbalGarden	Planting of Nakshatra Vana Saplings	Significance of rare plants with medicinal values	26



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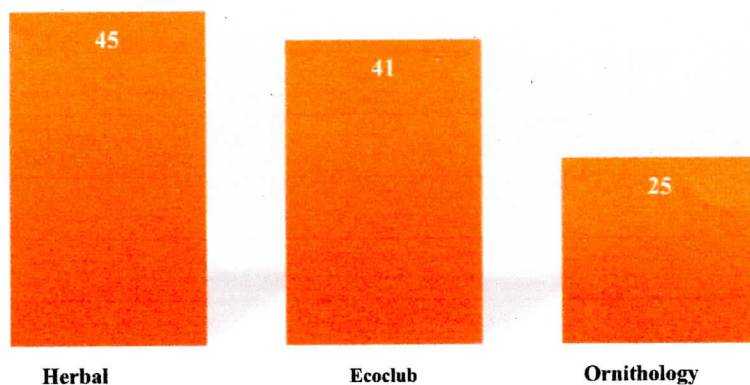


3.	19.11.2022		Planting of ornamental plants in Eco recharge garden	Create awareness on how to set up a landscape	15
4.	17.03.2023	Ornithology Club	Awareness programme on Human Animal Conflict	Understand the need for protecting the habitat of the animals and consequences of intrusion	25

## NUMBER OF BENEFICIARIES

The Centre has conducted programmes which focused on sharing knowledge on environmental issues and the roles and responsibilities that the students as youth should take up to find solutions. The number of beneficiaries is given in the figure year wise.

No of



*Winn*  
8/5/23  
CGE DIRECTOR



*[Signature]*  
PRINCIPAL

PRINCIPAL

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