



NIRMALA COLLEGE OF PHARMACY

(A UNIT OF CATECHIST SISTERS OF ST. ANN'S, HYD)

ATMAKURU (Village), Mangalagiri (M), Guntur Dist-522503, A.P, India.

Approved by AICTE & PCI New Delhi & Govt. of A.P, Affiliated to SBTET & A.N University, Guntur

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The Green Campus and Environment Policies

Introduction:

Nirmala College of Pharmacy is a Catholic Minority Institution established and administered by the Society of Catechist Sisters of St. Ann, Hyderabad, under article 30 (1) according to the constitution of India. The management was founded in 1918 in Nalgonda Dist., A.P. by Rev. Fr. Silvia Pasquali, PIME to spread the light to Christ through various activities. The objectives of the Management are the culmination of the vision of its founder to eradicate poverty, Social injustice, oppression and in ignorance among rural masses, which is the mission of Catechist Sisters of St. Ann. The management has extended its services to 15 districts of Andhra Pradesh, Karnataka, Tamilnadu, Kerala in India, as well as in Italy and Tanzania of North Africa. It is administer ring 70 Educational Institutions, 11 colleges, 35 hostels, 10 hospitals, 10 social service centers, 1 home for the aged, 65 old age support schemes and 34 charitable projects. There are 45,600 students being catered to in these Educational Institutions. The society consists of a large group of members with outstanding social status. The society was established with a great vision to provide quality education on par with global standards to the students from all over India and in particular those from local and rural areas. Society is maintaining high standards so as to make them technologically competent and ethically strong individuals who shall be able to improve the quality of life and economy of our country. Nirmala College of Pharmacy is committed to transform lives and serve the society through pursuit of excellence in teaching, innovation, lifelong learning, cultural enrichment and outreach services.

Nirmala College of Pharmacy realizes sustainable and holistic waste management essential in reducing its environmental footprint and providing a safe and healthy work environment for teaching and non-teaching employees, students and visitors. The College has a duty to ensure that all the campus wastes are disposed of responsibly by using proper waste segregation mechanism at the source and if possible, converting it into value added environment friendly product. Furthermore, hazardous waste should be disposed of or managed




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by government approved registered waste contractors. The purpose of the policy is to facilitate implementation of the action plan brought out in "National Environment Policy 2006" on management aspects of hazardous waste including their minimization, environmentally sound management and active promotion of transfer and use of cleaner technologies.

Scope of the Policy:

The focus areas of The Green Campus, Energy and Environment Policies are:

- Clean Campus Initiatives
- Landscaping Initiatives
- Clean Air Initiatives
 - ◆ Smoking Free Campus
- Infrastructure
 - ✚ Solar Power Plant
 - ✚ Water Conservation through Rainwater Harvesting System
- Waste Management processes
 - ◆ Solid Waste Management
 - ◆ Liquid Waste Management
 - ◆ E-Waste Management
- Awareness Initiatives
- Green Audit
- Energy Audit
- Plastic-Free Campus

The College will adopt the principles of the 'Best practicable environmental option' in the delivery of its waste management services. The College will apply a 'waste hierarchical approach', to reduce, reuse, recycle and recover waste products in preference to the disposal of waste to landfill.



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Fig. 1. Waste Hierarchy list in order of preference from the most favorable (top) to the least (bottom).

The College recognizes the importance of meeting these legal requirements and to manage its waste responsibly, reduce the volume of waste sent to landfill and maximize reuse and recycling where possible.

The College requires all the teaching and non-teaching staff, students, guests and anyone else making use of the premises to comply with this Policy. Any solid waste generated in the campus shall be managed and handled in accordance with the compliance criteria and the procedure laid down in Municipal Solid Wastes.

Policy Objectives

The objectives of this policy are:

- To continuously improve the efficient use of all resources, including energy and water, and to reduce consumption and the amount of waste produced, recovering and recycling waste where possible.
- To make the campus plastic free. To conduct environmental and energy audits from time to time.



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- To minimize the use of paper in administration through having policy for E-governance.
- To minimize waste generation at source and facilitate repair, reuse and recycling over the disposal of wastes in a cost effective manner.
- To provide clearly defined roles and responsibilities to identify and coordinate each activity of the waste management.
- To promote environmental awareness in order to increase and encourage waste minimization, reuse and recycling.
- To invest into the expansion of recycling opportunities on the College campus and transform waste into value added products.
- To ensure the safe handling and storage of wastes on College campus.
- To provide appropriate training for teacher, resident, staff, students and other stakeholders on waste management issues.
- To promote holistic approach of waste management in the campus.

Organization and Management

The responsibilities and organizational arrangements for this Waste Management Policy lie with a variety of personnel within the College

Environment Sustainability Management Cell Committee:

- a. Dr. Sk Abdul Rahaman, Principal - Chairman
- b. Mr. Naresh Babu R, NSS Programme Officer
- c. Mrs. Syed Reshma, Librarian
- d. Mr. P.dSrinivasa Rao, Lecturer, Environmental Sciences Dept.
- e. Mr. B Premchand, Student Co-coordinator
- f. Ms. N. V. Lakshmi, Student Co-coordinator




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Environment Sustainability Management Cell (ESMC), Nirmala College of Pharmacy is responsible for:

- i). Provision of advice and guidance to the College on waste management.
- ii). Setting Environmental Performance Indicators for waste management.
- iii). Reporting annually to the College on progress against the 'Environmental Performance Indicators'.
- iv). Monitoring and auditing the management systems for all wastes, to ensure safety and legal compliance.
- v). Monitoring and auditing all waste contractors working for the College
- vi). Provision of appropriate training for all personnel who have responsibilities for waste management.
- vii). Coordinating the gathering of, and supplying all relevant information to appropriate enforcement agencies, when information relating to waste management is requested.
- viii). Investigation of any incidents or spillage relating to all type of hazardous and general waste management.

Action Plan

Clean Campus Initiatives

Nirmala College of Pharmacy actively co-ordinates cleanliness activities in the college and beyond the campus in accordance with the vision of Swachh Bharat Abhiyan. It commits to continue with this Programme. The broad vision is as follows:

1. Generating mass awareness on cleanliness and hygiene amongst students and staff members by holding regular cleanliness drives. The idea is to motivate them to contribute in a proactive manner.



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2. Activities under 'Swachh Bharat Abhiyan' will be a key component of all the community work being done by NSS volunteers of the college.
3. Staff Members will be encouraged to participate in the cleanliness drive in the college campus.
4. Events such as poster and slogan competitions, essay writing, speeches, skits on 'Swachh Bharat' will be organized.
5. Rallies on themes connected with 'Swachh Bharat Abhiyan' in and around the college campus will be conducted to create mass awareness.
7. Administer of the pledge by students and staff members to maintain cleanliness of the college campus and its surrounding areas on an annual basis.

Landscaping Initiatives

It is a vital part of the life of a campus, providing space for study, play, outdoor events, relaxation and aesthetic appreciation. Green campus landscapes also manage runoff, help recharge groundwater, and clean and cool the air on campus. The landscape serves as a visual representation of the campus community's commitment to sustainability. As campus landscapes are so visible and accessible, landscaping initiatives are a great way to build awareness around the environment.

Clean Air Initiatives

We encourage our students and staff to use public transportation. The entry of automobiles inside the campus is restricted to discourage the use of private vehicles. Our campus is also located rural part of Mangalagiri. For this reason, we feel responsible to maintain our green cover. The abundant natural landscape cleans the air on campus.




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Infrastructural Initiatives

Renewable Sources of Energy ♦

Nirmala College of Pharmacy is dedicated to minimize and sustainably manage its use of electricity. The College believes in reducing the consumption of electricity produced by non-renewable resources by switching to clean energy sources like solar energy for purposes like lighting the campus. Hence solar panels were installed on top roof of the college hostel building.

Energy Saving and Energy Efficient Equipment

♦ We commit to install environment-friendly electrical appliances that save energy and reduce wasteful inefficiencies. The college believes in using cleaner energy such as LED lighting.

Water Conservation through Rainwater Harvesting System

♦ Nirmala College of Pharmacy has committed itself to the effort to replenish the groundwater table by practicing rainwater harvesting. This practice helps in the replenishment and recharge of the groundwater.

Waste Management Processes

Nirmala College of Pharmacy strives to have a minimal impact on the environment and is dedicated to reduce and manage the waste generated by the college campus. The following specific procedures will be undertaken to ensure College contribution in protecting the environment.

.Solid Waste Management

♦ With its aim to provide holistic education that also has a positive impact on the environment, the college will adopt practices that will mitigate the generation, and manage solid waste through the following methods:

- Systematically engage with the 3R's of environment friendliness (Reduce, Reuse and Recycle).
- Collect paper waste produced on campus and collaborate with scrap dealers for recycling.
- Reduce use of paper by supporting digitization of records.



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- Reduce requirement of printed books by updating the e-books and e-journals collection of the college library.
- Take initiatives to spread awareness amongst students about
 - Food wastage and ways of minimizing it
 - Minimizing the use of packaged food
 - The habit of reusing and recycling non-biodegradable products →
 - Organizing workshops for students on solid waste management | →

Liquid Waste Management

- Minimize the use of water by constructing more Indian style toilets instead of western style toilets. Continued employment of a caretaker to take immediate steps to stop any water leakage through taps, pipes, tanks, and toilet flush etc. Reuse of wastewater generated by the Reverse Osmosis (RO) system in washrooms.

E-Waste Management

◆ Nirmala College of Pharmacy ensures that its usage of technology and generation of e-waste does not impact the environment. For this purpose, the college plans to strive towards: More provisions for the disposal of the institutional e-waste.

- Awareness amongst students about reduction of e-waste and environment friendly
- Disposal practices for e-waste. Encouraging department and society level activities pertaining to e-waste management. •

Awareness Initiatives

Outreach and education are of utmost importance so that all members of the campus community may value the objectives of the policy and aid in its implementation. This is why Nirmala College of Pharmacy supports and encourages awareness campaigns, seminars, workshops, conferences and other interactive sessions to facilitate effective implementation of the Green Campus, Energy and Environment policies.



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Environment-centric Student Clubs and Department Activities

Nirmala College of Pharmacy encourages all the departments and specific student societies like Green warriors, NSS, and others to organize events, competitions and training sessions that will bring about positive environmental changes at the grass root level. The college supports departments and student clubs in molding the students into active agents of environment protection and conservation.

Green Audit

The College started to conduct a Green Audit of our college campus to assess our strengths and weaknesses to further our goals of long-term sustainability. A green audit is a useful tool to determine how and where most energy or water or resources are being used. The college can then consider how to implement changes and make savings. It can determine the type and volume of waste. Recycling projects or waste minimization plans can be adopted. It will create health consciousness and promote environmental values and ethics. It provides a better understanding of the impact of ecofriendly practices on campus. Green auditing will promote financial savings through reduction of resource use. It is imperative that the college evaluate its own contributions toward a sustainable future.

Energy Audit

An Energy Audit to be conducted as and when required to further reduce its carbon footprint. The importance of reducing energy consumption cannot be overstated. The energy audit, with its specialized tools will identify wastage of energy. Such an inspection often reveals several different flaws which cause a loss of significant amounts of energy which the college will not be able to detect. These flaws often have easy and affordable solutions and provide significant savings.

Plastic-Free Campus

Nirmala College of Pharmacy has been observing most of its duties in terms of solid waste management since its inception. In view of the Government of India's resolution to ban all single use plastics due to the hazardous impact of plastic use and pollution, the college administration strictly bans the use of single use plastics in its premise to make it a 'Plastic Free Campus'.




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- Encouraging student clubs to hold tree planting events

It will be mandatory on the part of the Head of the department/ Principle Investigator (Project)/ in-charge (Animal House) to report changes/additions in hazardous waste generation and steps taken to reduce generation of waste per unit of production. As per the Hazardous Waste regulations, College can store hazardous waste for a period not exceeding 90 days and shall maintain a record of sale, transfer, storage, recycling and reprocessing of such wastes. The waste could be recycled /reused or disposed of in captive or common treatment, storage and disposed facilities available in the campus or incinerated, as proposed in the waste hierarchy list (Fig.2). Inventories of 'end of life' consumer products such as e-waste are also required to be made.



Fig. 2. Waste Hierarchy list in order of preference from the most favorable (top) to the least (bottom).



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Waste avoidance and waste minimization at source

In the hierarchy of waste management, waste avoidance and waste minimization have to be attempted first, for which dissemination of information on technological options should be a continuing exercise. Promote implementation of recovery of resources such as solvents, other reagents and by-products as well as re-generation of spent catalysts in a time frame manner.

Reuse, recovery and recycling of non-hazardous waste

College will explore options/ opportunities of reusing, recovery and recycling of non- hazardous waste in an environmentally sustainable manner. Paper waste will be recycled to make paper board and packing material. The toxic inks and dyes of the paper will be treated with enzyme technology, which is environmentally benign.

Safe disposal of hazardous waste

For the waste which cannot be recycled/ reused, safe and environmentally sound disposal will be adopted depending upon the waste category. Setting up of common Treatment, Storage and Disposal Facilities Common treatment plant for the departmental and household waste will be established and the degradable and non-biodegradable waste will be segregated and treated according to their physical nature.



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