



## Babu Jagjivan Ram Government Degree College

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### GREEN CAMPUS POLICY

Babu Jagjivan Ram Government Degree College, Narayanaguda, is at the forefront of the mission of inculcating environmental consciousness in the young minds of the students, so as to create a long-term value for the society. Since a healthy planet is a necessary condition to guarantee decent work, productivity and sustainable livelihoods, the college is committed to promoting environmental consciousness and sustainability. In this context, the college has drafted a comprehensive 'Green Campus Policy,' duly incorporating the various Green Initiatives taken up by the college.

#### **The Concept of 'Green Campus':**

A Green Campus is a place where environmental-friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. 'Going green' means to pursue knowledge and practices that can lead to more environmentally friendly and ecologically responsible decisions and lifestyles. In turn, these decisions and lifestyles can help protect the environment and sustain its natural resources for current and future generations. By doing so, we reduce air pollution and environmental toxins that could affect our body's immune system that fights infections. Another advantage of going green is that it helps decrease the number of pollutants released to the environment.

#### **Rationale:**

The Green Campus concept offers the institution the opportunity to take the lead in rethinking its environmental culture and developing new paradigms for solving problems that are local, national, and global in nature. It is all about sweeping away wasteful inefficiencies and ushering in positive changes. Many of these changes address the daily, practical aspects of campus life—correct disposal, handling, and storage of cleaning chemicals and materials associated with labs; purchase of environmentally friendly supplies; effective recycling programs, etc .

Changes don't happen all at once. They can be approached through a manageable, step-wise process in which changes are built into the institutional planning and budgeting processes, with an eye toward continually improving the campus and implementing responsible measures.

**Policy Statement:**

The institution's approach towards green campus is to adopt environmental friendly practices and inculcate environmental consciousness among the students, and sensitivity towards issues like climate change and environmental issues. It also focuses on taking necessary actions like rain water harvesting, energy conservation, tree plantation, waste management, green practices, etc.

**Aims:**

- To make the campus less wasteful
- To raise awareness for eco-friendly causes
- To promote environmentally friendly habits like reducing, reusing, and recycling
- To create environmental awareness among the future generation
- To motivate the students to keep their surroundings green and clean
- To educate the students to create awareness among the public and sanitary workers as to stop the burning of waste which cause respiratory disease.
- To educate children about re-use of waste material and preparation of products out of waste

**Implementation:**

The most important Green Campus Initiatives taken up by the college are as follows:

- Waste Management in the Campus
- Rain Water Harvesting Facilities/Awareness
- Restricted Entry Of Automobiles
- Ban on the Use of Plastics
- Landscaping with Trees and Plants

## **A. WASTE MANAGEMENT IN THE CAMPUS**

### **SOLID WASTE MANAGEMENT**

Conducting awareness campaigns on the need to segregate waste among people is a continuous process. It is mandatory for segregation of dry solid waste (non-biodegradable /recyclable waste) and wet solid waste (bio-degradable waste) at source.

As a part of this, the Eco Club has organized an 'Awareness Campaign on Solid Waste Segregation (Blue & Green Basket Campaign) in collaboration with Greater Hyderabad Municipal Corporation (GHMC) Swachh Bharat. The Campaign mainly emphasized on the importance of solid waste segregation and it was limited to dry solid waste (non-biodegradable/recyclable waste) and wet solid waste (bio-degradable waste).

The wet solid waste is mainly collected from the leftover food of the students and staff, garden litter, etc. The statistical data like weight of the wet waste, time of collection and weight of compost produced, etc., is maintained in the record. Students even collect the food waste from their rooms through a project called the "Bucket Program."

### **WET SOLID WASTE MANAGEMENT:**

The wet solid waste consisting of only bio-degradable waste is now processed to compost using two methods, viz., Vermicomposting and Organic Composting.

#### **Vermicomposting::**

A common way used in this process is by building 'Worm Bins' which contain earthworms. Earthworms, which are called the 'farmers friend,' are Nature's boon given to the earth because it can convert organic waste to compost. The wet solid waste consisting of only bio-degradable waste is added to the bins under controlled temperature and moisture for the worms to eat. The end product of Vermicomposting is Vermicompost, which is a nutrient rich organic substance that can be added to soil to increase its organic matter and increase available nutrients. The process works all through the year.

### **Organic Composting:**

The wet solid waste consisting of bio-degradable plant is converted into odour-free raw compost using 'Sanitreat' and 'Bioculum' which consist of multiple saprophytic micro-organisms that convert the raw compost into rich compost in just 15-20 days curing cycle. The process is a patented version. The 'Sanitreat' and 'Bioculum' is available with the company "SUN GREEN ORGANICS" with which the college has entered into an MOU. The organic composting is done on a small scale in the composting pots. This composting is mostly done by students of the Eco Club as live non - evaluated projects as a part of the awareness campaign.

### **DRY SOLID WASTE MANAGEMENT:**

The dry waste mainly consist of the paper waste is collected from various departments in the college campus. Recycling of a material will produce a fresh supply of the same material like for instance used office paper can be converted into new office paper.

In order to manage the Dry Solid Waste, Babu Jagjivan Ram Government Degree College has entered into an MOU with 'EARTH BOX' a non-profit organization which is a franchisee for ITC, India. As a part of this MOU, the college agreed to collect and give away the dry recyclable waste generated in the college and form Swachh WOW Hyderabad Chapter.

This synergic alliance is for the social cause of recycling of Dry Waste and creating sustainable livelihoods to the waste collectors/rag pickers. WOW will collect dry recyclable waste separately and bring to the Dry Resource Collection Centre (DRCC). EARTH BOX will accept all the dry recyclable waste and sort out the different categories recyclables and bale the same for further recycling. The Franchisee will give new notebooks and stationery or cash against the value of dry recyclable waste lifted.

The campus emphasizes on paper less /Paper free office transaction.

### **LIQUID WASTE MANAGEMENT:**

Liquid waste mainly consists of water used in the college campus for various purposes. One meaning of 'Liquid Waste Management' is returning water to its natural environment without adversely impacting the ecology. There is a need for water for different purposes, viz drinking, washing, use in wash area, use for lab purposes and other utilities in the college campus.

Awareness campaigns are conducted to save water and to reduce the wastage of water by the staff and the students. The chemicals used in the labs are mostly non-hazardous and non-toxic and neutral in nature. The sewage water let out from various purposes must be conveyed and transferred to a treatment plant by appropriate pipes, firstly it moves into the pipeline of the drainage of the college and gets collected in the

main drainage system of the Municipality where the sewage treatment is done in the sewage plant of the Municipality.

#### **E-WASTE MANAGEMENT:**

"Electronic waste" is defined as all the secondary computers, entertainment devices, mobile phones, all other items like television, refrigerators, whether they are sold or donated or discarded by their original owners or users. In simple terms, all those items mentioned above which are either dumped or disposed or discarded by their buyers, rather than recycling and reusing them is called E-Waste.

A major portion of this waste is generated through products like personal computers, laptops, etc. As a part of MOU with **EARTH BOX**, the organization also accepts the E- waste. The electronic waste is then sent to the recycling plant which combines dismantling for recovery of its components with increased cost-effectiveness of processing of bulk electronic waste.

Reuse is an alternative option to recycling, the Eco Club members use the e-waste in an innovative way in which the big spares such as CPU box, monitor outer cover, air cooler base are used for small sapling plantations. The dismantled spares parts of e-waste are used to make decorative artifacts.

### **B. RAINWATER HARVESTING FACILITIES/AWARENESS**

#### **Rain water harvesting pits**

- The college has one Rain water harvesting pits where the rain water percolates into the ground by which we can increase
  - To arrest the ground water decline and augment ground water table.
  - To conserve surface water runoff during monsoon
  - To reduce soil erosion
  - To inculcate a culture of water conservation
- To increase the rainfall and maintain the water cycle in the ecosystem tree plantation programmes are done regularly.

### C. RESTRICTED ENTRY OF AUTOMOBILES

The college campus has a restricted access from the main road and so, there is a restricted entry of automobiles, by default.

#### Mode of Transport by Staff and Students:

- a) **Bicycles:** The college is situated in the centre of the city with huge traffic and the class rooms and other facilities are at easily accessible distance , hence the usage of bicycles is very limited.
- b) **Public Transport:** More than 60% of the staff and 80% of the day scholars use Public transport to reach the college as the college is in the heart of the city where we have many RTC buses and nearby Railway MMTs station.
- c) **Rent, Borrow, or Share a Bike** is also followed by students and staff.

### D. BAN ON THE USE OF PLASTICS

#### Plastic free campus:

As plastic is one of the dry wastes that is non-degradable, it has to be recycled and re-used. Students are educated by the harmful effects of plastic, like covers choking the throat of animals, pollutants released while burning the plastic. They are also encouraged to use paper bags rather than plastic carry bags.

The college has been declared to be a 'Plastic-Free Campus,' duly following the guidelines issued by the UGC on 30.08.2019. Accordingly, the college ensures that the campus is plastic free. The MOU with **EARTH BOX**, includes non-residual plastic which can be bottles, covers, sheets, boxes, etc.

Some of the other major green initiatives taken up the college are:

- **Reuse of Plastic Bottles** for growing plants, 'Say no to Plastic' and 'Make Plastic-free Campus' programmes were conducted
- A **Vertical Garden** was built by the students as part of the above programme and to bring environmental consciousness

- **Paperless office** (or "paper-free" office) is a work environment in which the use of paper is eliminated or greatly reduced. This is done by converting documents and other papers into digital form.
- As the college has most of the documents like bills, receipts, business cards they are scanned and stored digitally for later reference. These can be shared online which saves time as well as money.
- The present system of reviewing the NAAC SSR reports is also a type of paperless presentation where all the documents are scanned or sent as soft copy.
- Except like few important legal documents and other contracts the college is emphasizing on paperless office.
- The college encourages the vendors to send Invoice through email and Purchase orders are also sent through email.
- The college is scanning and storing all the old documents for space management and easy access of the documents and they can be duplicated and printed n ... times.
- It is difficult to adapt so easily as all the individual in the college are not well versed using the system, Hence the college has started an innovative way to encourage the individuals by rewarding them.

#### **E. LANDSCAPING WITH TREES AND PLANTS**

Babu Jagjivan Ram Government Degree College, is located in the heart of the city, in Narayanaguda, behind Melkote Park, in a small plot of land admeasuring 1649 sq. yards. The college building is constructed in around 7500 sq. ft. The lack of space has been a great disadvantage to the college, as there is very little scope to expand horizontally. The only option being vertical expansion, the college is going for the construction of additional classrooms and laboratories on the 3<sup>rd</sup> and 4<sup>th</sup> floors.

In addition to the lack of adequate classrooms, there was a glaring lack of space to establish a garden. Therefore, the college decided to start a small garden utilizing the available space. In this connection, the Department of Botany submitted a proposal for taking up Green Initiatives at their own cost as a part of their Departmental Social Responsibility Activities. Their proposal was accepted and ratified in the College Planning and Development Council Meeting held on 31.03.2021. Accordingly, the B.J.R. Garden was established with the following objectives:

**Objectives:**

- To beautify the campus
- To serve as environmental stewards, outdoor classrooms, and living laboratories
- To add value to the college experience by offering hands-on learning experiences and research opportunities those students will not find anywhere else.
- To turn theoretical concepts into real-world experiences for the students

**Materialization:**

The Department of Botany carried out all the Green Initiatives as per their proposal, and today, it maintains a Botanical Garden situated in the college campus with plants tagged with their biological nomenclature. Over the past two years, the garden continued to expand, housing a wide variety of annuals, perennials, trees, and shrubs – in all, a total of 179 different plant species, with a total number of plants coming up to 1323 plants.

The garden includes a green house, a Linnaean garden, a Medicinal and Herbal Plant Garden, Vermicomposting and Organic composting units, Bio-fertilizer (Azolla Cultivation), Vertical garden with Plastic Bottles (REUSE Concept), Self-watering plants, Green house with Sciophytes (shade loving plants), Two large Tubs with aquatic plants and Taxonomy plants for class work and examination material.

As of 31.03.2021, the department boasts of having planted saplings, and different kinds of plants in the college campus. The details are as follows:

**Types of Plants in the Campus Garden**

Sl. No.	Type of Garden	Length	Breadth	Total Area
1.	Wall Garden	24ft.	5.5 ft.	132 sft.
2.	Medicinal/Herbal Plant Unit	29 ft.	5 ft.	145 sft.
3.	Composting/Bio-fertilizer/Medicinal Plant Unit	18 ft.	11 ft.	198 sft.
4.	Botanical Garden	43 ft.	2 ft.	86 sft.
		34 ft.	9 ft.	306 sft.
		22 ft.	3.5 ft.	77 sft.
		12 ft.	1 ft.	12 sft.
5.	Flower Garden	38 ft.	2 ft.	76 sft.
6.	B.J.R.G.D.C. Logo	17 ft.	3.3 ft.	56 sft.
	<b>TOTAL</b>			<b>1088 sft.</b>



### **Taxonomy plants for class work and examination material:**

The campus garden aims at providing students with an understanding of how plants work, of the different elements of a garden ecosystem, such as plants, soil, nutrients, pests and weeds, as well as showing how the different elements interact with one another.

The Plant Taxonomy Course in the Botany second year curriculum also provides the information on how to identify (from their appearance) which plants will grow under shaded or full sun conditions, and how to manage garden pests and diseases from an understanding of their lifecycles, without the use of artificial chemicals.

### **Medicinal and Herbal Plant Garden:**

The department offers a course in medicinal plants in its second year Botany curriculum and has a few medicinal plants in the garden. There are about 70 different types of medicinal and herbal plants in the garden. Medicinal plants have a great role in human life and India has rich diversity of medicinal plants. About 90% of herbs are used in manufacturing of Ayurveda, Siddha, Unani and Homoeopathy medicines.

The objective of establishing this garden is to maintain a conservatory of the most common and important species of medicinal and aromatic plants which are being used in day-to-day primary health care.

All the plant species were authentically identified by expert taxonomists, labelled and in many cases their therapeutic values in curing different diseases are also highlighted. The garden grows herbs such as ginger, basil, mint and turmeric and also grows pineapple, lemon grass, and aloe, etc. It also holds plants that help in medicine and in other aspects of everyday life.

### **Indoor Air Purifying Plants:**

Living in an energy efficient, modern building can have unintended side effects. One of these side effects is less air flow. Lack of air flow allows for indoor air pollution to build up and cause health issues like asthma or sick building syndrome. In fact, modern furnishings, synthetic building materials, and even your own carpet may carry more chemicals than expected. These chemicals can make up to 90 percent of indoor air pollution.

In 1989, NASA discovered that houseplants can absorb harmful toxins from the air, especially in enclosed spaces with little air flow. This study has been the basis for newer studies about indoor plants and their air cleaning abilities. While plants have less horse power than air purifiers, they're more natural, cost effective, and therapeutic. Hence the department has taken the initiative to place Indoor Air Purifying Plants. Presently the Department is maintaining 100 Indoor Air Purifying Plants in the college.

### **BJR Model of Modular green wall:**

The Vertical Garden Module is made up of reused plastic pet / cool drink bottles and horizontal PVP pipes.. It has an attractive look, is highly durable in nature and can be easily installed. It provides an instant solution for making a garden in your residing place and it is a self-watering model. Students can make this model at their homes/ apartments and can take up small entrepreneurial projects.

### **BJR Model of Vegetated mat wall:**

In this system, rows and columns of re-used plastic pet/cool drink bottles with pockets filled with the plants and pot mix is placed/fixed as a mat on the wall. Nutrients and water are delivered through an irrigation system at the top of the wall

### **Conclusion:**

Babu Jagjivan Ram Government Degree College, Narayanguda, is thus, moving ahead with a strong commitment to foster environmental consciousness and sustainability among the staff and students of the college, as well as, the community around us. In spite of all the constraints, the college has stood by the values that it believes in. The campus garden is one example of this commitment towards society and the nation.

<b>Policy Title</b>	Green Campus Policy
<b>Ratified by College Planning and Development Council</b>	10.02. 2020
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