

Waste Management

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VFSTR



VIGNAN'S

Autonomous Hill Station, Dehliwala & Chavandl

(Deemed to be UNIVERSITY)

ESTD. AS A CLASSIC 601 YEAR

VFSTR: A Green Campus



VIGNAN'S

Foundation for Science, Technology & Creativity

(Deemed to be **UNIVERSITY**)

विज्ञान विश्वविद्यालय

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Waste Management at VFSTR



Vignan's Foundation for Science, Technology, and Research (VFSTR) has been preparing globally acceptable, industry-ready skilled professionals to aid the socio-economic transformation of the region as well as the country as a whole. It provides quality education in a diverse and intellectually stimulating environment. The institute celebrates the power of knowledge, cultivates vision and builds awareness about the self and society around. VFSTR (deemed to be University) situated in the rural area of Vaclamudi in Guntur district of Andhra Pradesh offers a pristine green environment to its students and staff. The campus employs an efficient solid waste management..

Key features of VFSTR waste management:

- ▶ Segregation of waste at Source
- ▶ Biogas Plant: 1000 KPD BioUrja plant
- ▶ Landfill and Compost
- ▶ Plastic Bottle Shredder
- ▶ Incinerators
- ▶ E-waste management (through third party)
- ▶ Sewage Treatment Plant for Liquid Waste Management
- ▶ MOUs with Industries for Waste Management

Solid Waste Management (SWM) at VFSTR



VFSTR campus comprises of Bhuvana Vijayam bhavan (A block), Vishweshwara bhavan (H block), Aryabhata Bhavan (U block), Nagarjuna block (J block), M.L. Shroff building (Pharmacy block), Priyadarshini girls hostel, Vignan's Vihar boy's hostel, guest house, library building and the open campus. Solid wastes are collected regularly from these places and they are segregated at source. The waste generated on campus is broadly divided into wet waste and dry waste and toxic waste (chemical and sanitary waste). Total wet waste generated is 590 kg per day approximately. Dry waste is 335kg per day and toxic waste is about 115 kg per month approximately. The wet waste of campus is used in the biogas plant for generation of the bio gas which is in turn is used for cooking purpose. The plastic wastes are shredded compacted in the on campus plastic bottle and utilization for developing value added products is also carried out. The toxic waste are handled very judiciously. Three incinerators are present on campus for this purpose. The chemical waste from laboratories are handle very effectively and disposed of after proper treatment. The university also has various tie ups and several MOU's with various industries dealing with waste management for training and waste management purpose.



SWMat VFSTR



- Segregation at Source

VFSTR has its focus on waste utilization and management. Sorting of wastes at sources aids this process and this practice is conducted worldwide especially in developed countries.

For this purpose, segregation of waste at source is done on campus. Colour coded bins are present for this purpose for the collection of wet waste (food waste, organic waste), dry waste, (plastic, papers etc.) and sanitary waste (sanitary pads, masks, gloves). Metal wastes (cans, containers, metal parts etc.) are also collected separately

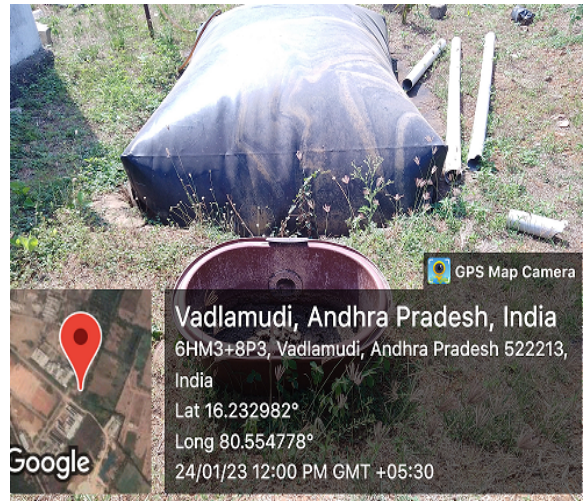


Colour-coded dustbins @ VFSTR

SW Mat VFSTR

- Biogas Plant: 1000 KPD BioUrja

The biogas plant which was established on campus in the year 2018 converts campus generated organic wastes into biogas which is again utilized for cooking purposes in hostel kitchen. The capacity of the plant is to digest 1000 kg of food waste per day and yield gas of about 70kg of LPC equivalent per day.



Biogas Plant at VFSTR

SWMat VFSTR



- Landfilling and Composting

Non hazardous solid wastes which are not re-utilized or given to any third party for their disposal and their storage requires open spaces are discarded in landfills at campus.

Since, VFSTR is a green campus dry plant parts constitute a significant part of the wastes. They are discarded at compost pits at campus.



Landfill and composting pits at VFSTR

Liquid Waste Management at VFSTR



A 600 KLD capacity sewage treatment plant system is being set up at VFSTR campus by Bluedrop enviro pvt ltd. which uses the technology of artificially constructed wetland system. This technology uses phytoremediation and microbial remediation techniques for sewage water treatment. This SIP is engineered to use the natural functions of vegetation, soil, and organism to provide waste water treatment. After treatment this waster will be reused for gardening and car washing purposes.



Vadlamudi, Andhra Pradesh, India

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India

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Long 80.554795°

24/01/23 12:02 PM GMT +05:30

STP at VFSTR

Biomedical & Sanitary Waste Management at VFSTR



VFSTR has three incinerators for disposal of biomedical and sanitary solid wastes.

VFSTR has installed a electrically heated incinerator of 30ltr capacity and having 7-9 KW electricity consumption at the animal house facility on VFSTR campus for incinerating animal wastes and other biotechnological and biomedical laboratory wastes on campus.

VFSTR campus has a sanitary napkin incinerator was installed at the girl's hostel premises for hygienic disposal of sanitary wastes. This incinerator had the capacity of burning 750 napkins per day.

Another incinerator was established at VFSTR at its medical centre which had a 3 KW single stage combustion chamber with a holding capacity of 5kg. The bio-hazardous wastes which included biological fluids, cotton, gauge pieces and sanitary napkins are safely incinerated here.

Incineration of biomedical solid wastes is one of the safest disposal methods and it reduces solid volume by 80-85%. Thus, such safe solid waste management practices are carried out on campus.



Incinerators at VFSTR

E-Waste Management at VFSTR



E-wastes or Electronic waste are one of the fastest growing component of solid wastes. E-wastes includes discarded computer equipment and variety of electronic devices.

VFSTR electrical equipment maintenance team is regularly monitoring E-waste generation and it routinely collects the electrical wastes and store and segregate them in the electrical store room before disposing them periodically through third party mediation.



Collection of E-waste at VFSTR

Plastic Waste Management



- Plastic Waste Shredder

Plastic waste management is an area upon which VFSTR puts a lot of importance. VFSTR installed in its canteen an 100 L volume AVANTI BS 100P pet bottle shredder. It can shred 7 bottles per minute. This shredder is used in the canteen in order to manage plastic wastes effectively and reduce littering and make them more manageable for recycling processes through third party mediation.

This shredded plastic flakes are used for research works in areas of development of materials from plastic wastes, plastic biodegradation studies etc.



Plastic Waste Shredder at VFSTR

Chemical Waste Management at VFSTR



Chemical and biological wastes generated in laboratories requires proper disposal.

At VFSTR, chemical wastes which are generated are not disposed with regular wastes. They are collected separately at the laboratories. The solvents are not discarded through sewerage lines. Instead they are collected separately. After separate collection they are disposed of properly with third party help at times.

Biological laboratory wastes containing microorganisms are heat killed in autoclaves before disposal.

Radioactive wastes are not generated at VFSTR laboratories.



Chemical Waste Management at VFSTR

MOUs with Industrial Partners



VFSTR has MOUs with industries for aiding our waste management initiatives on campus.

S.no	Company	Nature of MOU
1	IIC Academy, India	Training program for waste management
2	Kiwis Eco Laboratories Pvt Ltd., India	Skill development for environmental management
3	Adepto Geoinformatic Pvt. Ltd., India	Research project collaboration in geospatial services and waste management
4	Ladder survey institute of technology, India	Program and research projects in land survey and waste management
5	Provenance IT solutions Pvt. Ltd., India	Knowledge and skill development in area of environment and training program in waste management
6	Sri sai manasa Nature tech Pvt. Ltd., India	Skill development in environmental management training and research in solid
7	Ipaga UM services Pvt. Ltd., India	Professional program in UAV applications and solid waste management
8	Veloway Env. Solution Pvt. Ltd., India	Training program in the area of environment for student and faculties
9	Nuthalpathy Quality control lab, India	Training and research program in the area of waste management



VFSTR team at Jindal Urban Waste Management Plant, Guntur

Aiming towards “Swachh Bharat” ...





एक कदम स्वच्छता की ओर



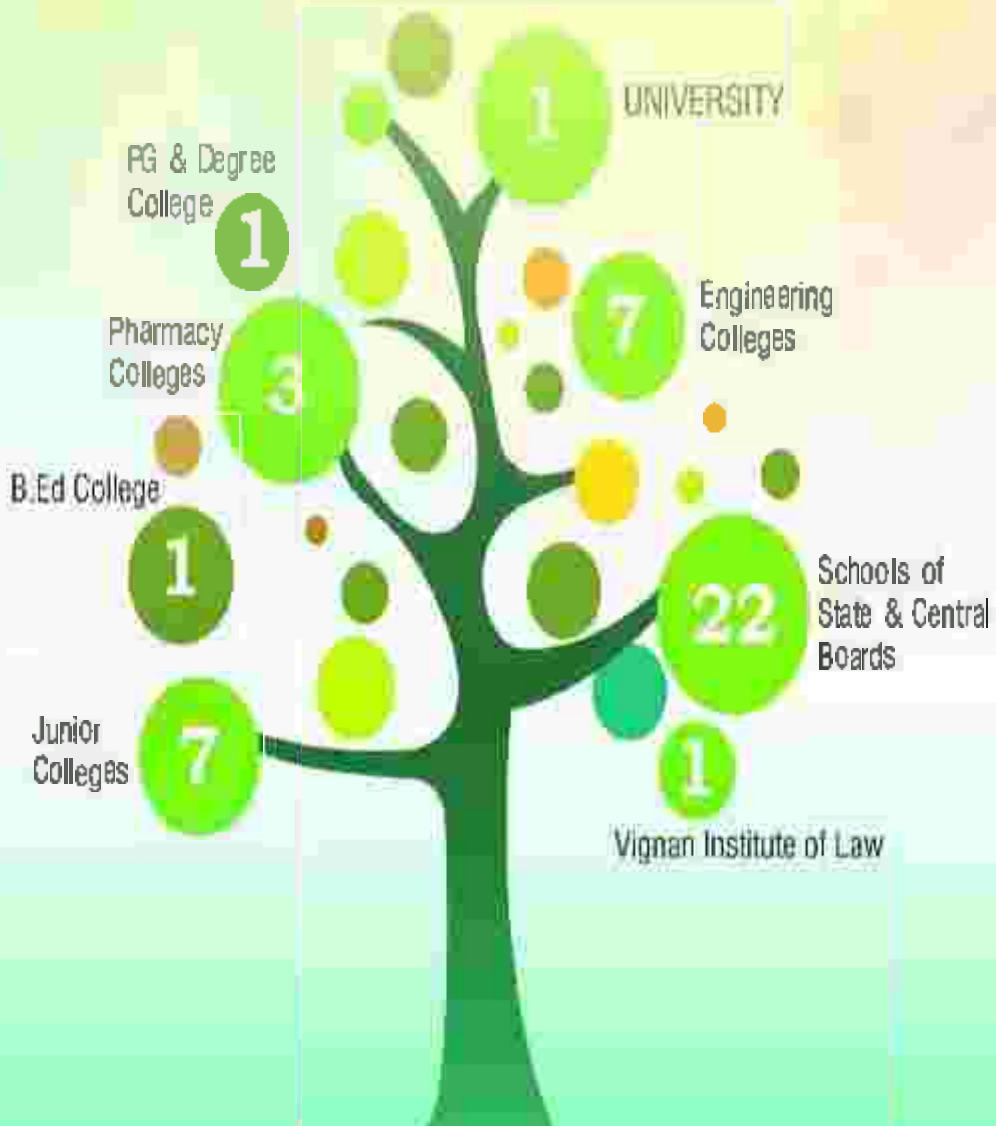
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WISDOM BETTER EDUCATION

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