Dr. D. Y. Patil College of Engineering and Innovation

Varale, Talegaon, Pune 410507

DYPCOEI

GREEN AUDIT-REPORT

Dr. D. Y. PATIL
COLLEGE OF ENGINEERING AND
INNOVATION

GREEN AUDIT REPORT
for
Dr. D. Y. PATIL COLLEGE OF ENGINEERING & INNOVATION

Carried Out By

GREENDASH ENVIRONOMICAL SOLUTIONS PVT. LTD.

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1.0 INTRODUCTION

Dr. D. Y. Patil Educational Federation's Dr. D. Y. Patil College of Engineering and Innovation (DYPCOEI) was established in 2014 by Dr. Sushant Patil under the able guidance of Padmashree Dr. D. Y. Patil, former governor of Tripura, Bihar and West Bengal and a well-known educationist and philanthropist from Kolhapur, Maharashtra.

Dr. D. Y. Patil College of Engineering and Innovation has been approved by All India Council of Technical Education (AICTE) New Delhi, recognized by Government of Maharashtra (GoM) and Affiliated to Savitribai Phule Pune University (SPPU), Pune. The institute is offering four undergraduate programs: Computer Engineering (Intake 180), Artificial Intelligence-Data Science (Intake 60), Mechanical Engineering (Intake 60 at third year) and Civil Engineering (Intake 60 at third year).

Right from its inception, DYPCOEI has adopted Outcome Based Education (OBE) and Student-centric approach. The institute has a vision to achieve excellence in quality education through value based rapidly changing technologies and create technical Human-Resource with proficiencies of accepting new challenges.

Towards this vision, the management, faculty and staff are working on mission of Continuously striving to impart value-based education to elevate satisfaction level of all stakeholders, taking dedicated efforts to create competent professionals by effective teaching learning process with passion of lifelong learning attitude, promoting and supporting innovative research,

entrepreneurship, development activities through Industry Interaction.

The Institute has experienced, dedicated and highly qualified faculty (6 PhD holders,8 pursuing PhD and 32 post graduate), state-of-art infrastructure and an environment conducive for learning, research and innovation.

Details of the infrastructure of college is as per below:

Plot Area – 2.5 Acre

Constructed Area - 4829.00 Sq Mtrs

Administrative area of the college is as follows:

Administrative Area(Qty)	Area Available in Sq M
Class Rooms (13)	858
Tutorial Rooms (04)	138
Seminar Hall (01)	160
Additional Workshop (01)	220
Computer Center (01)	160
Drawing Hall (01)	145
Workshop (01)	205
Library (01)	405
Admin Area (01 P+ 05 HoD+..)	735

During Audit, Greendash team interacted with following college team members:

Sl.	Name	Designation	Email and Contact
1.	Dr. Suresh Mali	Principal	principal.dypcoei@dypatilef.com 8007022300
2.	Dr. Alpana Adsul	Vice-Principal and Head, Department of Computer Engg.	hod_computer@dypatilef.com 9309246435
3.	Dr. Latika Desai	Head, Department of Artificial Intelligence – Data Science	hod_aids@dypatilef.com 9309232914
4.	Mrs. Dipannita Mondal	Head, Department of First Year Engineering	hod_fe@dypatilef.com 9309226768

2.0 COLLEGE CAMPUS LOCATION

The Campus is situated at SR. NO. 27/A/1/2K, Near Talegaon Railway Station, A/P Varale, Talegaon, TalMaval,Dist Pune 410507, Maval, Pune, Maharashtra, 410507. Campus is surrounded by Greenery maintained by the College administration.
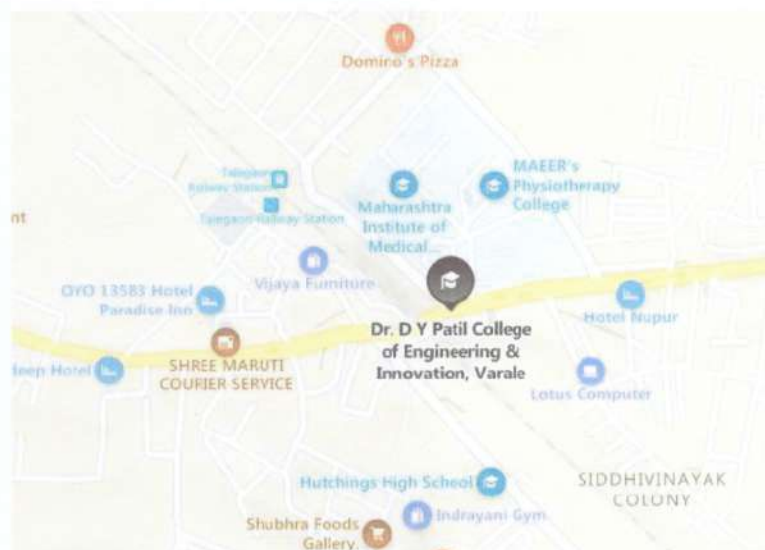

Figure -1:- Location of College

3.0 GREEN AUDIT

For Green Audit following 9 major areas were covered and compliance/initiatives under these areas were verified /validated.

1. Use of Natural Resources (Ventilation & Day Light)
2. Green Environment
3. Water Management
4. WastewaterManagement
5. Power Management
6. PaperWasteManagement
7. Solid Waste Management
8. Rain Water Harvesting
9. GreenPrograms(Greeninitiatives)

3.1 Use of Natural Resources (Ventilation & Day Light)

- College Building is designed and constructed with taking care of Natural Ventilation and lighting on priority.
- Corridors are wide and good ceiling height is also taken for proper ventilation. Most of the corridors receive good daylight.
- Classrooms, Labs and Library have large windows. Windows are kept open for adequate day light. (See Fig. 2)
- On the other side Curtains are also provided to avoid the reflection and distraction to the students.
- Classrooms are designed in a way to provide easy and safe exit during any emergency as well as provides good ventilation and sunlight also.
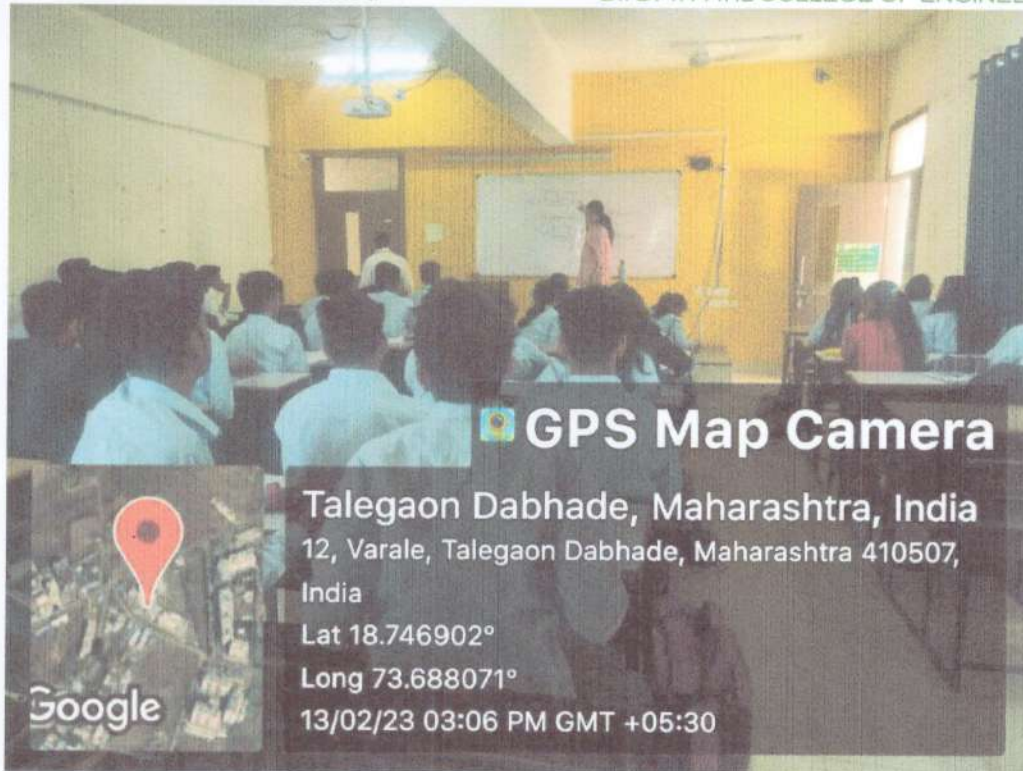
Figure -2:-Provision for Natural light and Ventilation in the rooms

3.2 Green Environment: -

College has planted following trees with the involvement of Teachers, Students, Visitors in the campus for increasing the green Quotient as well as awareness among the students about the importance of trees in one's life.

Sr.No	Name of tree	Quantity	Avg. Age (Years)
1	Palm tree	20	1
	Big tree	**118**	
1	Coconut	02	3
2	Neelgiri	03	7
3	English Pagara	05	3
4	Gulmohar Yellow	50	6
5	Gulmohar Red	05	3
6	Nilwa	20	3
7	Kalam	08	3
8	Apata	10	3
9	Bitwa	02	2
10	Umber	01	3
11	Mango	02	2
12	Kadulimb	07	1
13	Supari	03	1
	Medium Tree	**121**	
1	Frence Seek	08	1
2	Ram Fal	02	1
3	pomogranate	01	3
4	Ghaital Show Tree	03	1
5	Morepankhi	05	1
6	Christmas Tree	02	2
7	Bamboo Medium	50	2
8	Bamboo Small	50	1
	Small Tree	**45**	
1	Hibiscus	30	1
2	Hibiscus small	15	1
	Big Pot Tree	**43**	
1	Palm	05	2
2	Hibiscus	03	1
3	Rose	10	2
4	Mogara	02	2
5	Kunda	02	1
6	Leman	01	1

7	Alovera	05	2
8	Zendu	15	1
	Small Pot	**69**	
1	Pinjra	05	3
2	Tulshi	15	1
3	Red Leaf Show	10	1
4	Pink Leaf Show	10	1
5	Kateri Pam	10	2
6	Mogara	19	1

Figure 3- Students Playing on Lush Green College Ground

3.3. Water Management:

Source of fresh Water is river INDRAYANI water and it is good for drinking. The Institute has taken connection from Varale, Tal. Maval, Dist. Pune. In addition to this water connection, the institute also take water from the private agencies to accomplish the need of the campus.

➢ The drinking water to all students, faculty and staff is provided through the Water Purifier RO Plant at various points in college building.

➢ Storage tanks were installed at various locations for storage of water for   various purposes to avoid frequent running of pumping system to keep the water line under pressure.

➢ Water meter is not installed to monitor the quantity of water from government supply. Charges are paid on fixed basis. Due to this exact water consumption is not being tracked.

➢ Normally mops are used for floor cleaning to avoid the water wastage during floor cleaning

➢ Water saving taps is installed in the washrooms.

➢ Water conservation Signage can also be displayed in the water usage pointsto create awareness among users and increase water conservation.

➢ Sensor based Taps can also be Installed to eliminate the water wastage.

➢ Regular maintenance is carried out by the institution for all water pipes and tabs. Construction of tanks and pipes to store and use the rain water during heavy rains has helped us in meeting the daily requirements of the institution campus.

3.4 Wastewater Management:

Sewage Treatment Plant (STP) is installed for treating the domestic waste water and treated water is used for horticulture purposes. Annual maintenance contract is given to local agency M/s Jay Ganesh Enterprises. Quality of treated Sewage water meets the Pollution control board norms.

3.5 Power Management:

Electricity:

Electricity issuppliedbylocalelectricitydepartment.Themajorelectricityconsum ingequipmentinstalledinthecampusis

- WindowsandSplitAC,

- Submersible Motor,

- Motors,

- Air Cooler,

- Water Coolers

- RO Plant,

- Desktop,

- Printer,

- Fan,

- Tubelight,

- LED Bulb, etc.

The institute has taken the following Initiatives for energy conservation.

➤ In every classroom and LAB under the Electrical switch board the sticker are pasted to convey and appeal the students and faculty to Switch off the light and fans when they are not in use.

➤ Awareness program has been conducted on energy conservation.

➤ Use of energy efficient LED tube lights and bulbs are used in the campus

➤ The LED monitors are used in Computer Machines instead of CRT type monitors.

➤ Use of Uninterrupted Power only at unavoidable places such as Server Rooms, Sound and PPT presentations at Seminar Hall, Accounts section, Principal Office etc

➤ Automatic Start mode of DG set is kept in manual mode to avoid the frequent on-off during power cuts. Only emergency supply is given by UPS and DG. Auto-mode is started during examination and emergency.

➤ Use of Air conditioners are avoided expect few locations

➤ The pumps to lift the water in overhead tanks are in manual mode and timely uplifting the water as per the need of the campus.

➤ Every Class room and LAB has been naturally illuminated because of the environment friendly architectural design of the building.

Figure 4:- Signage on Switch Boards

3.6 Paper Usage Management:

In an educational institute papers are used widely for any type of communication, record, documentation etc. leading it to generation of waste paper.

The College has taken many steps to optimize and avoid paper usage. Following are the observations:

➢ Both side of paper is used for print out or photo copy.

➢ Most of the internal communications are done through digital mode.

➢ Innovative practices are followed by staff as Used papers are used for rough work, file marker, page separator etc.

➢ Old papers are given to vendor for recycling.

➢ The institute has ERP System, E-MIS system to perform most of administrative and Academic work in which reduction of paper usage like online working/approvals.

➢ College is carrying out following activities with ERP and E-MIS systems to reduce the paper usage:

• Admission of the students

• Students profile and I-Card Generation

• Fee Collection through payment gateway

• Activity Budget Approvals

• On-line Assignment submission

• Exchange of information: department to office &vice versa

3.7 Solid Waste Management:

It was observed that:

➤ College maintains the waste collection facility in the college for segregated waste collection.

➤ Outside Vendor is identified for collection of the waste from the college as per the defined frequency and will dispose as per the waste characteristic.

➤ Single use utensils are not promoted in the campus. Reusable utensils are encouraged widely and various sessions are being organized for the same.

3.8 Rain water Harvesting:

It was observed hat:

➤ College is using the rain water by storing in the tank wherever possible.

➤ It is recommended to install the Rain water recharging structure in the campus.

3.9 Green Initiatives:

In addition to the regular academics, there are several co-curricular and extra- curricular activities are conducted for the holistic development of student in DYPCOEI. Several value-added programs are conducted for technical growth of the students. Honour Courses with options for Major and Minor have been introduced as per SPPU guidelines in Artificial Intelligence (AI), Internet of things (IoT), Robotics, etc. Students undergo many co-curricular and extra-curricular activities like NSS camps, social and environmental cause events, International Yoga Day Celebration, Sports, Cultural Events, Induction Programmes, Farewell Programmes, Art workshops, Quizzes, Veteran's Visits, Celebrity Visits etc. Institute has e-bulletin published every month on institutional website to give information of these activities. Every Department has their own Students' Association through which, several programmes are organized every semester.

Collegeis organizing various awareness campaigns to create awareness among students such as

- ➤ Environment Day

- ➤ Tree Plantation Drive

- ➤ Earth Day

- ➤ Single Use Plastic awareness

- ➤ Energy Conservation

- ➤ Green Environment Campaign

- ➤ Road Safety Week etc.

Glimpses of the events is shown in the Figure 5,6,7

Figure 5- No to Plastic Pollution Drive

Figure 6- World Environment Day

Figure 7- Awareness Drives

4.0 Recommendation

4.1 For Improving Energy Efficiency:

- Central control switch / MCB can be installed in each classroom.
- Installation of automatic light switch sensors can be considered.
- Whenever new equipments are being procured, Life cycle assessment can be made for the equipment and based on those eco-friendly products can be preferred depending upon the usage.
- Energy consumption can be tracked on regular basis to identify the major energy consuming equipments / processes and consumption optimisation can be planned upon them.
- The institute can install motion detection lighting mechanism in all the washrooms so that the washrooms lights are only used whenever there is need.

4.2 Water Conservation:

- Being Water a very critical resource in the coming near future, water plays a vital role in every one's life. As students will be our brand ambassadors for improving the water conservation habits among society. Awareness sessions for water conservation can be planned for the students.
- Minimize/ reduce water usage by installing water saving faucets.
- Waterless urinals can be considered to reduce water consumption in the washrooms.
- Water balance chart to be prepared to identify the major water consumption areas. Water meters to be installed at key areas. Based on the consumption data water consumption projects / initiatives can be taken.