

# Certificate of Registration

This is to Certify that  
Energy Management System of

## MANGALMAY INSTITUTE OF ENGINEERING & TECHNOLOGY

PLOT NO. 8 AND 9, KNOWLEDGE PARK II, GREATER NOIDA,  
UTTAR PRADESH - 201310, INDIA

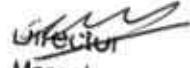
has been assessed and found to conform to the requirements of

# ISO 50001:2018

for the following scope :

PROVIDING B.TECH – CSE, B.TECH – CSE (AI), B.TECH – CSE (DS) PROGRAMMES

Certificate No	: 23EQNM20	Issuance Date	: 09/08/2023
Initial Registration Date	: 09/08/2023	2nd Surve. Due	: 09/07/2025
Date of Expiry	: 08/08/2026		
1st Surve. Due	: 09/07/2024		

  
Director  
Mangalmay Institute of Engineering & Technology  
Greater Noida (U.P.)-201310  
(College Code-786)



  
Director

**Magnitude Management Services Pvt. Ltd**  
Third Floor, A-60, Sector-2, Noida, Gautam Budh Nagar, U.P.-201301, India

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## MANGALMAY INSTITUTE OF ENGINEERING & TECHNOLOGY

PLOT NO. 8 AND 9, KNOWLEDGE PARK II, GREATER NOIDA,  
UTTAR PRADESH - 201310, INDIA

has been assessed and found to conform to the requirements of

# ISO 14001:2015

for the following scope :

PROVIDING B.TECH – CSE, B.TECH – CSE (AI), B.TECH – CSE (DS) PROGRAMMES

Certificate No : **23EENO22**  
Initial Registration Date : 09/08/2023  
Date of Expiry : 08/08/2026  
1st Surve. Due : 09/07/2024

Issuance Date : 09/08/2023

2nd Surve. Due : 09/07/2025

*Director*  
Mangalmay Institute of Engineering & Technology  
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*Demu..*  
**Director**

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PLOT NO. 8 AND 9, KNOWLEDGE PARK II, GREATER NOIDA,  
UTTAR PRADESH - 201310, INDIA

has been assessed and found to conform to the requirements of

# ISO 9001:2015

for the following scope :

PROVIDING B.TECH – CSE, B.TECH – CSE (AI), B.TECH – CSE (DS) PROGRAMMES

Certificate No : 23EQNV28

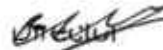
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# ENVIRONMENT AUDIT REPORT

## MARCH - 2023

**Mangalmay Institute of Engineering & Technology**  
**Plot No.8&9 Knowledge Park (II),**  
**Greater Noida**  
**Delhi NCR**

**Audit Conducted by:**

**MAGNITUDE MANAGEMENT SERVICES PVT. LTD,**  
**THIRD FLOOR, A-60, SECTOR -2, NOIDA,**  
**GAUTAM BUDH NAGAR (UP)**  
**203301**

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*Director*

Mangalmay Institute of Engineering & Technology  
Greater Noida (U.P.)-201310  
(College Code-786)

## **Prologue**


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Environment Audit refers to a structured process involving the identification, quantification, documentation, reporting, and analysis of the various components comprising the environmental diversity of diverse establishments. Its primary objective is to assess and scrutinize the environmental practices both within and outside the concerned premises, with the aim of nurturing an eco-friendly ambiance. Environment Audit serves as a valuable tool to analyze particularly in terms of energy, water, and resources. By identifying areas of excessive use, institutions can strategize and implement changes that lead to resource conservation and cost savings.

Furthermore, an Environment Audit facilitates the assessment of waste generation, encompassing both its nature and volume. This practice not only contributes to more effective waste management but also cultivates a heightened sense of health consciousness and environmental consciousness among stakeholders.

One of the paramount benefits of an Environment Audit lies in its ability to augment awareness, values, and ethics concerning the environment. By engaging staff and students in this process, MIET shall provide with a deeper understanding of the ecological impact within their immediate surroundings.

In conclusion, an Environment Audit is a meticulous procedure that systematically assesses and documents the environmental facets of establishments. It aids in optimizing their resource usage, minimizing waste, and inculcating a sense of environmental responsibility.

  
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## ENVIRONMENTAL AUDIT -QUESTIONNAIRES

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- I. Waste Minimization and Recycling
- II. Greening
- III. Energy Conservation
- IV. Water Conservation
- V. Clean Air
- VI. Animal Welfare
- VII. Environmental Legislative
- VIII. General Practices

1. Does any Environmental Audit conduct earlier?

Yes, this is the third time a systematic way of monitoring their environmental analysis initiative taken by Mangalmay Institute of Engineering & Technology for environment protection.

What is the total permanent population of the Institute? ( Approximate Numbers)

Particulars	Total
Students	650
Teachers	52
Non-Teaching Staff	18
Sub Total	720
Approximate Number of Visitors (Per day)	10


2020-2021 - 2021-2022: 319

Where is the campus located?

Mangalmay Institute of Engineering & technology is a Engineering college located in plot no.8&9, Knowledge Park II Greater Noida, Delhi NCR

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Page 3

  
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Which of the following are available in your institute?

1 Garden area	Available
2 Playground	Available
3 Kitchen	Available
4 Toilets	Available
5 Garbage Or Waste Store Yard	Available
6 Laboratory	Available
7 Canteen	Available
8 Hostel Facility	Available
9 Guest House	Available


Which of the following are found near your institute?

1 Municipal dump yard	Not in the vicinity of the institute, No
2 Garbage heap	NO Garbage heap
3 Public convenience	Yes, public convenience is available
4 Sewer line	Installed
5 Stagnant water	No stagnant water
6 Open drainage	Yes, properly maintain and sanitized
7 Industry - (Mention the type)	No
8 Bus / Railway station	Yes, available nearby from campus
9 Market / Shopping complex / Public halls	Yes, within 500 mtr.
10 Sewerage Treatment Plant	Yes, Capacity -300KLD



## I - WASTE MINIMIZATION AND RECYCLING

1.	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper, plastic, Horticulture Waste etc.		
2.	What is the approximate amount of waste generated per day?	Wet Waste	Horticulture waste	Dry Waste
		06 kg	04 Kg	05 KG
3.	How is the waste generated in the institute managed? By 1 Composting 2 Recycling 3 Reusing 4 Others (specify)	Reuse of one side printed Paper for internal communication. Sewage water used for gardening. Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste. Horticulture waste is also disposed by Ghaziabad Authority.		
4.	Do you use recycled paper in institute?	Yes		
5.	Do you use reused paper in institute?	Yes		
6.	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.	Done in locality for awareness of resource crunches		
7.	Can you achieve zero garbage in your institute? If yes, how?	Yes, 85% achieved, Possible through waste Engineering planning.		

  
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## II - GREENING THE CAMPUS

8.	Is there a garden in your institute?	Yes, about Approx. 15% areas are developed as Gardens.	
9.	Do students spend time in the garden?	2-4 Hours during winters	
10.	Total number of Plants in Campus	Plant type	Approx. number
		Trees	381
		Ornamental	674
11.	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Ashoka, FicusReligeosa, Bogavellia, Bottle palm, Tunn, Jackfruit and many more as per geographical regime.	
12.	Is the institute having any Horticulture Department	Yes	
	Number of Staff working in Horticulture Department	2 Gardeners, Management Deptt. looks water pipe line maintenance and Estate officer looking maintenance	
13.	Number of Tree Plantation Drives organized by college per annum.(If Any)	Yes, Two Tree Plantation Drives are Organized Annually. 35 trees and 140 shrubs planted in this financial year.	
14.	Number of Trees Planted in Last FY.	20	
	Survival Rate	95%	
15.	Plant Distribution Program for Students and Community	Yes, Saplings are distributed to Students and visitors at various Occasions. Besides this landscape of some area in city are developed by Institute.	
16	Plant Ownership Program	Various trees are planted and owned by faculty, staff, visitors and as well as by the students. The name plates are also displayed near the plants.	

### III - ENERGY

<p>17. List ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.</p>	<p>Electricity saves by use of CFL/LED bulbs for illumination, LPG saves by use of Pressure cookers for cooking food.</p>
<p>18. Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some</p>	<p>Yes, energy saving methods like switching off the electrical gadgets, when not in use. Use of Natural Lights and Natural Ventilation are promoted.</p> <p>Messages are displayed at various locations to Aware the People about Energy Savings. Renewable source of energy through solar plant is under planning to install at Mangalmay Institute of Engineering &amp; technology..</p>
<p>19. How many CFL/LED bulbs has your institute Installed?</p>	<p>Checked No conventional Bulbs and are replacing it with energy efficient lights.</p>
<p>20. Are any alternative energy sources employed / installed in your institute? (Photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.) Specify.</p>	<p>Yes, upgradation work is in progress</p>
<p>21. Do you run "switch off" drills at institute?</p>	<p>Yes</p>
<p>22. Are your computers and other equipment's put On power-saving mode?</p>	<p>Yes, In Practice</p>
<p>23. Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how Many hours?</p>	<p>Yes, All machinery are working only when required. Printer/ fax are switched on during the usages only.</p>

#### IV - WATER CONSERVATION

24.	List four uses of water in your institute	Basic use of water in campus: 1. Drinking -150 KL/month 2. Gardening - 250 KL/Month 3. Kitchen and Toilets -150 KL/month 4. Others - 100KL/month
25.	How Does your institute store water? Are there any water saving techniques followed in your institute?	06Nos of Overhead and Underground Water Tanks installed for storage of water. To avoid overflow of water-controlled valves are provided In water supply system. Close supervision for water supply system.
26.	If there is water wastage, specify why and How can the wastage be prevented / stopped?	There is no water wastage methodology used.
27.	Locate the point of entry of water and point of exit of waste water in your institute. Entry- Exit-	Entry- Water comes from Authority Water Supply at campus Exit- From Water Drainage System to STP (cap 300KLD)
28.	Write down four ways that could reduce the amount of water used in your institute	Basic Four ways: 1. Dripping of water from taps is closely monitored. 2. Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage 3. Water Conservation awareness for new Students 4. Reuse of waste water
29.	Record water use from the institute water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many litres of water have been used.	Water Meters are not available for calculation of usage of total quantity only.
30.	Does your institute harvest rain water?	Yes
31.	Is there any water recycling System.	Upgradation work is in progress

V - CLEANAIR

32.	Are the Rooms in Campus are Well Ventilated?	Yes				
33.	Window Floor ratio of the Rooms	Very Good				
34.	What is the ownership of the vehicles used by your institute? (Please Tick ✓ only one)	Yes				
		Operator-owned vehicles				
		✓	Institute-owned vehicles			
		A combination of campus-owned and operator-owned vehicles				
35.	Provide details of institute-owned motorized vehicles?	Buses	Cars	Vans	Other	Total
	No. of vehicles	1	26	1	0	28
	No. of Non-Air-conditioned vehicles	1	0	1	0	2
	PUC done	Yes	Yes	Yes	Yes	Yes
36.	Specify the type of fuel used by your institute's vehicles:	Buses	Cars	Vans	Other	
	Diesel	1	2	0	0	
	Petrol	0	3	2	0	
	CNG	0	1	0	0	
	LPG	0	0	0	0	
	Electrical/Battery	0	0	0	0	
37.	Air Quality Monitoring Program (If Any)	Yes, Monitoring is being done by approved Laboratory				
38.	Students suffer from respiratory ailments? (If Any)	There has been no reported case of respiratory ailments due to environment pollution.				
39.	Details of Genset	Silent DG Set installed for backup power				

## VI – ANIMAL WELFARE

40	List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)	Birds and Squirrels are commonly found in campus. A variety of birds species and other flora and fauna are available but these are not harmful to humans so institute doing their bit for its conservation.
41.	How many dogs in your area have undergone Animal Birth Control - Anti Rabies (ABC - AR)?	Not required
42.	Does your institute have a Biodiversity Programme or a KARUNA CLUB?	Not Available

## VII – ENVIRONMENTAL LEGISLATIVE COMPLIANCE

43.	Are you aware of any environmental Laws? Pertaining to different aspects of environmental management?	Yes
44.	Does your institute have any rules to protect the environment? List possible rules you could include.	Yes (Plantation, Restrictions of vehicles, garbage disposal, etc.)
45.	Does Environmental Ambient Air Quality Monitoring conducted by the Institute?	No
46.	Does stack monitoring of DG sets conducted by the Institute?	Yes, conducted
47.	Is any warning notice, letter issued by state government bodies?	No
48.	Does any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
49.	Does any Biomedical waste generated by the Institute? If yes explain its category and disposal method	No



### VIII -GENERAL

50. Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
51. Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
52. Does housekeeping schedule on your campus?	Yes, the Swachch Bharat movement
53. Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes, Periodically pollution reduction, plantation, energy conservation awareness campaigns carried out by the institute
54. Do Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes
55. Does Institute participate in National and Local Environmental Protection Movement?	Yes, Swatch CampusAbhiyaan by students at Campus.
56. Does Institute have any Recognition/certification for the environment's Friendliness?	Yes
57. Does Institute use renewable energy?	Yes
58. Does Institution conducts a Green/environmental audit of its campus?	Yes, This is the third environmental audit done by the institution
59. Has the institution been audited/accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	No



## 1 BEST PRACTICES/INITIATIVES FOR ENVIRONMENT

A	<b>Renewable Energy</b> Yes, renewable energy is used by Mangalmai Institute of Engineering & technology.	The solar system is available in Mangalmai Institute of Engineering & Technology and up-gradation work is in progress.
B	<b>Biodiversity Conservation</b> Flora and fauna conservation	It is in the schedule plan of Campus Environment committee
C	<b>Tree Plantation Drives</b> Two Drives Annually, as well as Every Guest, is honored by Tree Plantation at Campus.	Yes
D	<b>Ground Water Recharge</b> 02 units of Rain Water Harvesting System.	Yes
E	<b>Pollution Reduction</b> Personal Vehicles users used the carpool.	Reduction in Air Pollution through vehicular Emission.
F	<b>E-Waste Management</b>	Handover Authorized recycler
G	<b>Solid Waste Management</b> Lifting of garbage from Mangalmai Institute of Engineering & technology campus on an alternate day for landfill.	Yes
H	<b>Adoption of Village School</b> CSR	Yes
I	<b>Water Conservation</b>	Yes
J	<b>Corporate Resource Center (CRC)</b>	Mangalmai Institute of Engineering & Technology Corporate Resource Center (CRC) is dedicated to nurturing future leaders
K	<b>Mitigation measures for Air pollution at construction stage and operation stage by developing adequate green belt.</b>	Yes
L	<b>Mitigation measures for noise pollution by isolation of noise generation activities</b>	Yes
M	<b>Disaster Engineering plan</b>	Yes
N	<b>Fire protection system</b>	Yes
O	<b>Environment/Green committee</b>	For regulating eco-friendly initiatives at campus premises.

## 2 RECOMENDATIONS

- E-waste monthly inventory be maintained at campus as per E waste rules 2016.
- Water Meter should be installed at institute for monitoring of water consumption per capita.

### 3 CONCLUSION

This audit involved extensive consultation with the campus team and interactions with key personnel on a wide range of issues related to Environmental aspects. The Mangalmai Institute of Engineering & Technology has an Environmental Committee for sustainable use of resources. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for college campus team to initiate actions.

## 4 REFERENCE

- The Environment [Protection] Act - 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 - The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules: 1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act - 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules - 1975
- The Water [Prevention & Control Of Pollution] Cess Act-1977 (Amended 2003) and Rules-1978
- The Air [Prevention & Control Of Pollution] Act - 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules - 1982
- The Gas Cylinders Rules - 2016 (Replaces the Gas Cylinder Rules - 1981)
- E-waste Engineering rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Engineering and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Engineering and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

# THANKS



**MAGNITUDE MANAGEMENT SERVICES PVT. LTD,**

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*[Signature]*  
Director  
Mangalmai Institute of Engineering & Technology  
Greater Noida (U.P.)-201310  
College Code-786

Page 16

# GREEN AUDIT REPORT


## JUNE-2023

**Mangalmay Institute of Engineering & Technology**

**Plot No.8&9 Knowledge ParkII, Greater Noida  
(Delhi NCR)**

Audit Conducted by:

**MAGNITUDE MANAGEMENT SERVICES PVT. LTD,  
THIRD FLOOR, A-60, SECTOR -2, NOIDA,  
GAUTAM BUDH NAGAR (UP)  
203301**

  
Director  
Mangalmay Institute of Engineering & Technology  
Greater Noida (U.P.)-201310  
College Code 786



## Prologue

The process of urbanization and economic advancement on local, regional, and global scales has triggered numerous environmental and ecological predicaments. Given this context, embracing a green campus system becomes imperative for institutions as it paves the way for sustainable development. Mangalmai Institute of Engineering & Technology recognizes the urgency to tackle these fundamental challenges and reverse detrimental trends. As a respected higher education establishment, the Institute introduced 'The Green Campus' initiative a few years ago, actively championing diverse projects for environmental preservation and sustainability.

This audit serves the purpose of ensuring that the campus practices align with the institution's green policy. It encompasses various aspects of the Green Campus concept, such as water and electricity conservation, tree planting, waste Engineering, paperless operations, and biodiversity mapping. With these concerns in focus, the audit's specific objectives include assessing the effectiveness of the environmental sustainability Engineering framework and gauging departmental compliance with relevant regulations, policies, and standards. The potential outcomes of the audit are substantial, encompassing benefits to student health and learning, reduction of Institute operational expenses, and positive environmental impact.


## Utility of GreenAudit

The utility of green audit is to enhance ongoing human endeavors, seeking to mitigate the negative impacts of the actions on the environment. The environmental audit is a systematically and comprehensively endeavor to examine an organization's environmental impacts and subsequently creating a documented green audit report.

## Objectives of the Audit

The primary aims of the green audit encompass the protection of environment and conservation within the institute's campus. This audit serves the purpose of recognizing, measuring, delineating, and prioritizing the framework for environmental sustainability while adhering to relevant regulations, policies, and standards. The central goals of conducting a green audit are as follows:

- To raise awareness among all stakeholders of the institute regarding genuine environmental concerns and the imperative of sustainability.

  
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- To safeguard the environment and mitigate threats to human health by analyzing the extent and patterns of resource utilization on the campus.
- To establish foundational data for evaluating future sustainability, thereby preventing more challenging environmental disruptions that would necessitate costly corrections.
- To generate a comprehensive status report on environmental compliance at the present moment.

### **Methodology**

In order to perform a green audit, the methodology included different techniques such as physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following area to summarize the present status of environmental Engineering in the campus:

- Water consumption and Engineering
- Air quality assessment and Engineering
- Electricity consumption and Engineering
- Sound pollution monitoring
- Waste Engineering
- Biodiversity status of the campus

### **GENERAL RECOMMENDATIONS**


Based on the physical inspection and document reviewed on water distribution system, the following observations are noticed while conducting the audit of the institute.

#### **Water tank overflow**

It is noticed that Water flow alarm as well as level sensor were provided to overhead water tanks to check water overflow and wastage of water.

#### **Minimization of leakage water**

No leakages were observed in Valves at Institute building. However, it is also recommended to regularly check for leakages and fix them on urgent basis if noticed any leakage in any valve.

  
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### **Regular Maintenance of toilet system and use of water efficient fixtures**

It is found that regular maintenance of the toilets was carried out. The toilets are kept in working order by periodically inspecting and replacing flappers and other defective parts.

### **Capacity building of Staff Involved in Water Distribution**

The Engineering of Mangalmai Institute of Engineering & technology may arrange capacity building and awareness programs for the staff engaged in water distribution from time to time.

### **Other Initiatives to Maintain Water Efficient System in the Institute**

"MIET adopts all measures to check the wastage of water, reduces consumptive usage, improves the efficiency of water use, increases recycling and reuse of water, or prevents the pollution of water".

It is observed that the institute uses the following measures to maintain water efficient system in the campus:


- Better operating controls such as arresting leakages
- Change of device/ equipment such as replacement of water pumps and motor with energy efficient pumps and motors
- Process modification such as use of sprinklers for watering plants and garden

### **Recycle & Reuse**

- Use of treated water in toilets flushing, gardening, fountains, fire fighting equipment's
- Reduction of Fresh Water usage supplemented through waste water treatment.
- Direct use of Rain Water Harvesting through storage tanks

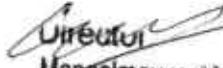
### **Recharge**

- Installation of recharge wells / rain water harvesting pits for recharging ground water tables.
- Total recharging capacity (during rain time) to be estimated in 3mm/hr.
- Rain Water Harvesting and conservation.

  
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### Electricity consumption (in Units) and Engineering (70KW)

MONTH	NPCL LOAD	NPCL UNIT CONSUMPTION (KVA)	SOLAR UNIT TOTAL GENERATION (KWH)	SOLAR UNIT CONSUMPTION IN CAMPUS (KWH)	SOLAR UNIT TRANSFER TO GRID	TOTAL CONSUMPTION OF ENERGY	% CONSUMPTION OF ENERGY THROUGH SOLAR
Jan-23	70KW	866.28	4916	4889.62	26.38	5755.90	84.95%
Feb-23	70KW	8126.13		-1161.36	1161.36	6964.77	-16.67%
Mar-23	70KW	6482.19	7678	6381.86	1296.14	12864.05	49.61%
Apr-23	70KW	11418.03	10689	9616.46	1072.54	21034.49	45.72%
May-23	70KW	16062.90	7889	7648.62	240.38	23711.52	32.26%
Jun-23	70KW		9228	9042.46	185.54	9042.46	100.00%
Jul-23	70KW	23457.60		-160.72	160.72	23296.88	-0.69%
Dec-22	70KW	586.74	7044	7016.54	27.46	7603.28	92.28%
Nov-22	70KW	549.93	6296	6261.48	34.52	6811.41	91.93%
Oct-22	70KW	842.19	6146	6134.10	11.90	6976.29	87.93%
Sep-22	70KW	772.53	6321	6308.76	12.24	7081.29	89.09%
Aug-22	70KW	1287.00	7433	7407.82	25.18	8694.82	85.20%
Jul-22	70KW	1061.91	7817	7798.58	18.42	8860.49	88.02%

  
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## Sound Detail of the Institute

Sound Detail	
Location	Sound Level
Third Floor Corridor	42
Third Floor Faculty Room	40
Third Floor Storeroom	49
Tutorial Room 1	47
Tutorial Room 2	45
Third Floor Classroom 1	50
Third Floor Classroom 2	46
Third Floor Classroom 3	44
Third Floor Classroom 4	45
Third Floor Classroom 5	47
Third Floor Classroom 6	43
Third Floor Classroom 7	46
Third Floor Classroom 8	45
Third Floor Classroom 9	47
Second Floor Corridor	47
Second Floor Faculty Room	39
Chemistry Lab	42
Tutorial Room 1	47
HoD's Room	42
Second Floor Class room 1	37
Second Floor Class room 2	37
Second Floor Class room 3	38
Second Floor Class room 4	40
Second Floor Class room 5	46
Second Floor Class room 6	50
Second Floor Class room 7	46
Second Floor Class room 8	47
Second Floor Class room 9	46
First Floor Corridor	48
First Floor Faculty Room	34
LAB-4 Computer Lab	42
Examination Room	47
Tutorial Room 1	47
Library	45
LAB-3 Computer Lab	42
LAB-2 Computer Lab	40
LAB-1 Computer Lab	40

Sound Detail	
Location	Sound Level
Server room	42
Audio Server room	40
Physics Lab / Dark Room	37
Language Lab	38
Ground Floor Corridor	42
Ground Floor Faculty Room	46
Director IQAC Room	48
Director's Board Room	44
Director's PA	45
Pantry	44
Admission & Placement Department	43
A Block Seminar Hall	45
Ground Floor Class room 1	37
Ground Floor Class room 2	37
Waiting Area	40
HR office	46
Admin Room	48
Girls Common Room	37
Indoor Sports Room	49
Reception	49
Counselling Room 1	37
Counselling Room 2	38
Counselling Room 3	42
Waiting Area	40
Registrar Room	48
Director Room	41
Accounts Room	46
Medical Room	44

## 1. Waste Disposal

The institute adopts Waste disposal system include the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste Engineering process.



The Waste which are generated are in solid, liquid, or gas type. The institute has different methods of disposal and Engineering. The Waste Engineering of the institute is intended to reduce adverse effects of waste on human health, the environment or aesthetics.

Mangalmay Institute of Engineering & Technology has employed waste bins for proper segregation of solid wastes in the campus.

Number of dustbins listed below:

**Details of dustbin & approx waste disposal**

1. No of dustbin: - 11 approx
2. Waste disposal quantity 450 KG approx per month

<b>BIG DUSTBIN DETAILS</b>		
<b>LOCATION</b>	<b>DEPARTMENT</b>	<b>QTY.</b>
<b>Gr. Floor</b>	Audi. Girls Wash-Room	1
	Pantry	2
	Common Girls Wash. Room	1
	Floor	2
<b>First Floor</b>	Common Girls Wash. Room	1
	Floor	2
<b>Second Floor</b>	Staff Girls Wash-Room	1
	Common Girls Wash. Room	1
	Floor	2
<b>Third Floor</b>	Common Girls Wash. Room	1
	Floor	2
<b>Grand Total</b>		<b>16+8</b>

**2. List of Trees in Campus**

<b>Sr. No.</b>	<b>Name of Trees</b>	<b>Quantity</b>
1	Neem (Medicinal)	8

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2	Guava	12
3	Mango	7
4	Lemon (Medicinal)	2
5	Jamun	9
6	Karonda	2
7	Pears	2
8	Pomegranate	5
9	Papaya (Medicinal)	1
10	Banana	2
11	Shisham	1
12	Okh	1
13	Banyan	1
14	Bakand (Neem)	3
15	Alastonia	28
16	Benjania (Cycas)	31
17	Ashok	35
18	Bel (Medicinal)	2
19	Palm	72
20	Harshirghar	4
21	Mahuva	1
22	Dhak (Medicinal)	2
23	Khata	1
24	Cycas	149

### 3. List of Plants in Campus

Sr. No.	Name of Ornamental Plants	Quantity
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1	Moorpankhi	37
2	Jinari	12
3	Star Jasmin	20
4	Elovera (Medicinal)	10
5	Raat ki Rani	3
6	Gagan Vila	2
7	Rose	12
8	Tulsi (Medicinal)	20
9	Mogra	24
10	Bangnia	7
11	Kaner	18
12	Gudhal	35
13	Gular	5
14	Earth Engle Jeasmine	12
15	Cycas Hedge	332
16	Trothic/cheti	10
17	Champa	15
18	Sada Bahaar (seasonal)	100+
19	Matricaria Chamomilla	5
20	Poppy	50
21	Marigold	50 +
22	Ice Plant	10

### Biodiversity status of the Institute campus

#### Method of Study

A brief methodology for the floral and faunal survey is given below.

  
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 Greater Noida (U.P.)-201310  
 College Code 786

1. Sampling was done mostly in a random manner.
2. The total area was surveyed by walking at the daytime.
3. Surveys were conducted for the maximum possible hours in the daytime.
4. Tree species were documented through physical verification on foot.
5. For faunal species, we emphasized mainly on the direct sighting. Also call of various birds and amphibians and nesting of some faunal species were considered as direct evidences.

### **Faunal Species**

The list of Fauna indicates that the Institute campus is significantly rich in faunal diversity. We have seen a significant number of bird nests at many places. We have not been able to document other insect groups during this survey.

### **Conclusion:**

Biodiversity status of Institute campus found satisfactory.

### **Suggestions and Recommendations**

- The Institute campus is no doubt biodiversified but more plantations especially medicinal plantations are required in the campus. Plantation of fruit plants will attract more birds.
- Sustainable use of resource and ecology balance of the Institute campus must be maintained through the year.
- Dry leaves can be used as compost fertilizer.
- The prolific use of insecticides/pesticides should be checked as these harmful chemicals are detrimental and instrumental for killing of insects/butterflies which are natural prey for the birds.

### **Drinking Water Quality Standard as per Bureau of Indian Standards IS 10500**

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S N	Substance Characteristics	Requirement (Desirable Limit)	Undesirable Effect Outside the Desirable Limit	Permissible Limit in the Absence of Alternate Source	Method of Test (Ref. to IS)	Remarks
1	2	3	4	5	6	7
<b>Essential Characteristics</b>						
i	Colour, Hazen units, Max.	5	Above 5, consumer acceptance decreases	25	3025(Part-4): 1983	Extended to 25 only if toxic substances are not suspected in absence of alternate sources. a) Test cold and when heated b) Test at several dilutions  Test to be conducted only after safety has been established.
ii	Odour	Unobjectionable	-	-	3025 (Part-5): 1983	
iii	Taste	Agreeable	-	-	3025 (Part 7&8):1984	
iv	Turbidity NTU, Max.	5	Above 5, consumer acceptance decreases.	10	3025 (Part 10): 1984	
v	pH Value	6.5 to 8.5	Beyond this range the water will affect the mucous membrane and/or water supply system	No relaxation	3025 (Part 11): 1984	
<b>Essential Characteristics</b>						
S N	Substance Characteristics	Requirement (Desirable Limit)	Undesirable Effect Outside the Desirable Limit	Permissible Limit in the Absence of Alternate Source	Method of Test (Ref. to IS)	Remarks
1	2	3	4	5	6	7
vi	Total Hardness (as CaCO <sub>3</sub> ) mg/l, Max.	300	Encrustation in water supply structure and adverse effects on domestic use. Beyond this limit taste/appearance are affected, has adverse effect on domestic uses and water supply structures, and promotes iron bacteria. Beyond this limit, test, corrosion and palatability are affected.	600	3025 (Part 21): 1983	To be applicable only when water is chlorinated. Tested at consumer end. When protection is required, it should be Min 0.5mg/l
vii	Iron (as Fe) mg/l, Max.	0.3		1.0	32 of 3025 : 1964	
viii	Chloride (as Cl) mg/l, Max.0.3	250		1000	3025 (Part 32): 1988	
ix	Residual free chlorine mg/l, Min	0.2		-	3025 (Part 26)1986	

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Mangalmai Institute of Engineering & Technology  
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S N	Substance Characteristics	Requirement (Desirable Limit)	Undesirable Effect Outside the Desirable Limit	Permissible Limit in the Absence of Alternate Source	Method of Test (Ref. to IS)	Remarks
1	2	3	4	5	6	7
x	Fluoride (as F) mg/l, Max.	1.0	Fluoride may be kept as low as possible. High fluoride may cause fluorosis	1.5	23 of 3025 1964	
<b>Desirable Characteristics</b>						
xi	Dissolved solid mg/l, Max.	500	Beyond this palatability decreases and may cause gastro intestinal irritation	2000	3025 (Part 16) 1984	
xii	Calcium (as Ca) mg/l, Max.	75	Encrustation in water supply structure and adverse effect on domestic use	200	3025 (Part 40) 1991	
xiii	Magnesium (as Mg) mg/l, Max.	30	Encrustation to water supply structure and adverse effect on domestic use	100	16.33.34 of IS 3025 1964	
xiv	Copper (as Cu) mg/l, Max.	0.05	Astringent taste, will be caused beyond this discoloration and corrosion of pipes, fitting and utensils	1.5	36 of 3025 1964	

S N	Substance Characteristics	Requirement (Desirable Limit)	Undesirable Effect Outside the Desirable Limit	Permissible Limit in the Absence of Alternate Source	Method of Test (Ref. to IS)	Remarks
1	2	3	4	5	6	7
xv	Sulphate (as SO <sub>4</sub> )	200	Beyond this causes gas- tro intestinal irritation when magnesium or sodium are present.	400 (sec. col. 7)	3025 (Part 24) 1986	May be extended up 400 provided Magnesium (as Mg) does not exceed 30
xvi	Nitrate (as NO <sub>3</sub> ) Mg/l, Max.	45	Beyond this methaemo- globinemia takes place	No relaxation	3025 (Part 34) 1988	
xvii	Cadmium (as Cd) Mg/l, Max.	0.01	Beyond this, the water becomes toxic	No relaxation	See Note 1	To be tested when pollution is suspected
xviii	Arsenic (as As) Mg/l, Max.	0.01	Beyond this, the water becomes toxic	No relaxation	3025 (Part 37) 1988	To be tested when pollution is suspected
xix	Lead (as Pb) Mg/l, Max.	0.05	Beyond this limit, the water becomes toxic	No relaxation	See Note 1	To be tested when pollution is suspected
xx	Zinc (as Zn) Mg/l, Max.	5	Beyond this limit it can cause astringent taste & an opalescence in water	15	39 of 3925 1964	To be tested when pollution is suspected
xxi	Mineral Oil Mg/l, Max.	0.01	Beyond this limit undesi- rable taste and odour after chlorination take place	0.03	Gas chromat- ographic method	To be tested when pollution is suspected

Source: Indian Railways Institute of Civil Engineering, Pune

THANK YOU

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