



COMPENDIUM ON SDG 7

AFFORDABLE AND CLEAN ENERGY

Goal 7:

Ensure access to affordable, reliable, sustainable and modern energy for all.



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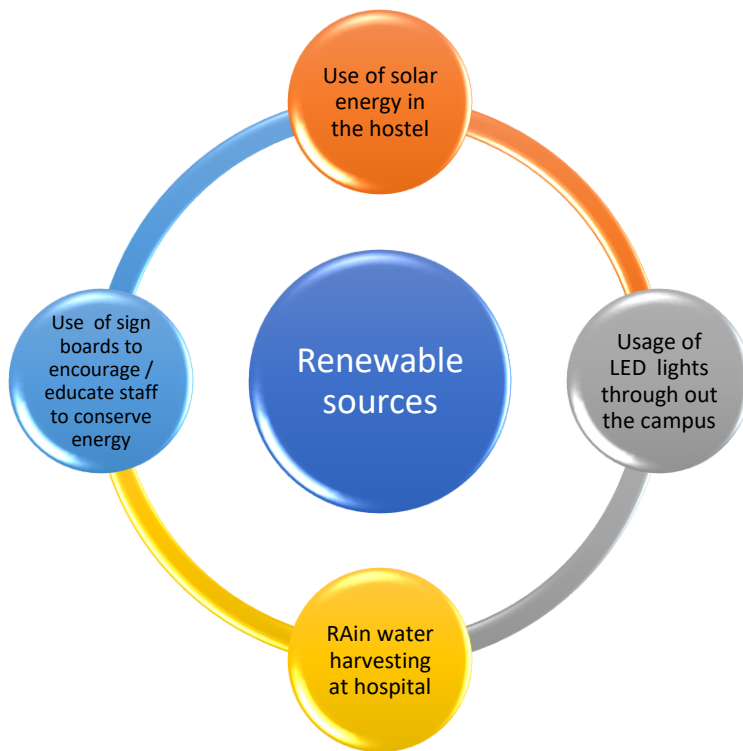
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Introduction

Energy needs to be conserved not only to cut costs but also to preserve the resources for longer use. As of today, most of the energy is generated from exhaustible sources. These sources do generate energy but also pollute the environment by emitting harmful gases in the atmosphere. These toxic gases are just not only harmful to the environment but also cause serious health concern to humans and animals. Every year millions of people die due to the presence of toxic substances in the air that we breathe. Energy is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions. Resources that are available to us today should be used economically to conserve them for future use since they are limited and will expire one day. In this view our university is following some of the best practices to not only to conserve energy but also to utilize renewable sources in effective way.

Renewable energy solutions are becoming cheaper, more reliable and more efficient every day. Our current reliance on fossil fuels is unsustainable and harmful to the planet, which is why we have to change the way we produce and consume energy. Implementing these new energy solutions as fast as possible is essential to counter climate change, one of the biggest threats to our own survival. It consists of Universal access to affordable, reliable and modern energy services. Increase the share of renewable energy in the global energy mix. Double the global rate of improvement in energy efficiency. Between 2000 and 2016, the number of people with electricity increased from 78 to 87 percent, and the numbers without electricity dipped to just below one billion. Yet as the population continues to grow, so will the demand for cheap energy, and an economy reliant on fossil fuels is creating drastic changes to our climate. Investing in solar, wind and thermal power, improving energy productivity, and ensuring energy for all is vital if we are to achieve SDG 7 by 2030. Expanding infrastructure and upgrading technology to provide clean and more efficient energy in all countries will encourage growth and help the environment.

MEASURES TAKEN BY JSSAHER TO SUPPORT SDG 7



Commitment towards SDG 7

IMPACT OF NOISE ON QUALITY OF LIFE

Dr. Kavya Sivapuram, ENT Post graduate, JSS Academy of Higher Education and Research, Mysuru.

Definition : Noise Induced Hearing Loss (NIHL) refers to reduction in auditory acuity as a consequence of excessive noise exposure.

- Temporary threshold shift
- Permanent threshold shift
- Gradual / Acoustic shock

Headache, Anxiety
Sleep disturbance
↑ Blood pressure
↑ Work Stress
↑ Risk of accidents
Job dissatisfaction

30						AT RISK
60						
80-110 db 110-130 140-150						

Mechanical damage of cochlea
Reduced blood flow
Oxidative stress
Glutamate excess
↓
Inflammation and apoptosis, OHC's damage

NOISE

A person exposed to 85 dBA per NIOSH or 90 dBA per OSHA over an 8-hour work shift, will reach 100% of their daily noise dose

NIHL IS A COMPENSABLE DISEASE UNDER EMPLOYEES STATE INSURANCE ACT AND WORKMENS COMPENSATION ACT

- Male > Female
- Abl gene
- OTOTOXIC AGENTS
- Smoking, DM
- Lack of clarity
- Tinnitus, Otagia
- Distortion of sounds
- Hyperacusis
- Recruitment

Acoustic dip/Boiler's Notch

Intratympanic Steroids

Gene Therapy




Prevention : Ear muffs, plugs, walk away from loud noise, timely exposure, use of sound level & noise dosimeters, control risk at source

Don't take noise for granted
There is no cure for hearing damage

Kavya, Sivapuram, Post graduate student, Department of ENT, JSS Medical College, Mysuru made a poster presentation on Impact of Noise on Quality of life in National Conference of Ortorhinolaryngology



Contribution to environmental awareness / protection

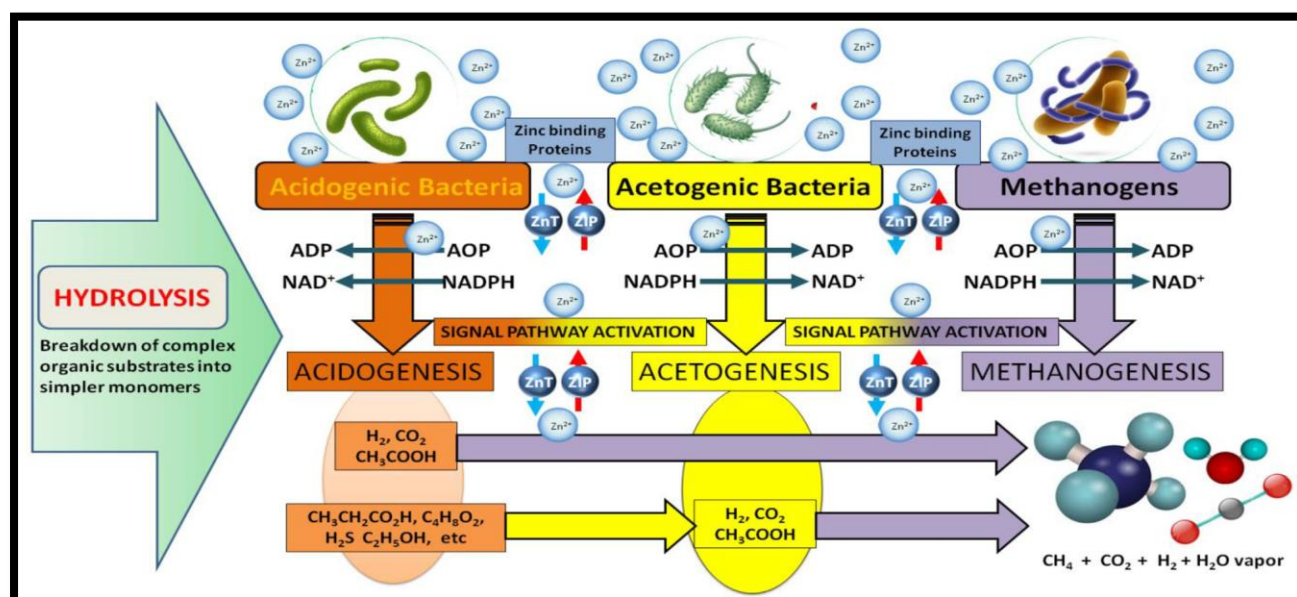
 <p>Dr Tejaswini C J Asso. Prof, Dept of Geriatrics</p>	<ul style="list-style-type: none">• Online COVID related environmental awareness program was conducted to Employees of Fulcrum global Company• Online COVID related environmental awareness program was conducted to Members of MHLC-109
 <p>Dr Shilpa Avarebeel Asso. Prof, Dept of Geriatrics</p>	<ul style="list-style-type: none">• Online COVID related environmental awareness program was conducted to Residents of Brigade horizon, Siddartha Nagar, Mysuru• Online COVID related environmental awareness program was conducted to Followers of Brahmakumari Samaja
 <p>Dr. Amoghashree, Sr. Resident of Comm. Medicine</p>	<ul style="list-style-type: none">• Delivered lecture on Air Pollution and Health in State conference at Department of PG studies in Swasthavritta, JSS Ayurveda Medical College & Hospital on 2nd Dec.2020.

World Hearing Day

During World Hearing Day program on March 3rd, awareness was spread regarding Noise Induced Hearing Loss and the need to protect our ears from excess noise.

Also, during the school screening programs, the children were educated about the need to protect our ears from loud sounds, the harmful effects of earphones and loud music and they were advised about the role of ear protection.

Dr Roshna S Robin, presented E poster on Noise Induced hearing loss and won the first prize in E poster competition organized as a part of World Hearing Day by Department of ENT, Sri Ramachandra Institute of Higher Education and Research, Chennai on



The above displayed image is a process, which describes the role of zinc ions in triggering the microbial metabolic activities leading to conversion of complex organic substances into methane through the processes of acidogenesis, acetogenesis and methanogenesis.

Best out of waste

Dr. N.M.Shamasundar -Made models of Corona virus using plastic balls, pins etc to educate general public about the virus, its structure, methods of transmission, symptoms, signs, management, & prevention.



World Environment Day celebration



World Environment Day

Only with a healthy ecosystem we can enhance people's livelihoods, counteract climate change and stop the collapse of biodiversity.

In line with this year's World Environment Day's theme - '**Ecosystem Restoration**', NSS unit of JSS Medical College, Mysuru, conducted "**Plant a sapling**" competition as part of the World Environment Day celebration on 05-06-2021 to encourage young volunteers to plant saplings and take care of them. Volunteers planted saplings at home and took photographs while planting them. Three best entries were awarded certificates based on the order of best involvement. Order of best involvement was judged by Dr. Rajalakshmi R., Professor & Head, Department of Physiology, JSS Medical College. First place was awarded to Nivedya Krishnan, second place was awarded to Gayathri Nair and third place was awarded to Ridhima Bajaj. The event brought a sense of awareness & responsibility among volunteers, promising to live by the true spirit of this occasion.



'Ecosystem Restoration', NSS unit of JSS Medical College, Mysuru, conducted **"Plant a sapling"** competition as part of the World Environment Day celebration

GREEN CAMPUS- Green and Clean Campus initiative - reduce the warming of the campus

enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil- fuel technology, and promote investment in energy infrastructure and clean energy technology

JSSCPO is providing the clean energy in the form of natural air by herbal gardens and other greenery in the campus.





Sign boards for awareness



Steps taken for effective utilization of renewable energy

ENERGY CONSERVATION MEASURES

- Light Bulb Replacement
- Sticker Reminders as part of their 'Energy Awareness Campaign' is placed on switch boards to remind everyone to conserve energy by turning off the lights.
- Small pamphlets emphasizing the importance of energy saving shall be prepared and circulated to all the staff and students of the college.
- Solar water heaters installed in colleges and hostels and in guest houses.

ELECTRICITY – UNDERGROUND CABLE WORKS COMPLETED



Underground Cable works and power backup

POWER / ELECTRICITY (Power back up: 24 x 7)

JSSAHE&R has created the facility of providing 24 x 7 power / electric supply either in the form of power connection through CHESCOM / TNEB and in case of failure in power supply, generators are installed in all the campuses for providing uninterrupted electric / power supply.

Campus	RR No.	Contracted Demand in KVA	Motor Constant	Date of Connection / Service	Generator
JSSMI Campus	HT - 166	450 KVA	2500	May 1995	2 dedicated generators of 450 KVA & 500 KVA capacity is provided with auto switch over facility
JSSCPM Campus	HT - 384	150 KVA	750	May 1995	82.5 KVA & 160 KVA
JSSCPO Campus	HT - 107	150 KVA	200	May 1995	100 KVA, 125 KVA & 150 KVA capacity is provided

Solar Projects



At the Institution level, solar panels have been installed which has considerably brought down the power consumption by at least 50% compared to earlier years. In order to set an example, the institution shares some of the electricity generated by solar energy to the local electricity board. Proper signages have been installed advising the users to always switch off the electricity when not in use.

Most of the lights have been replaced by energy saving bulbs and LEDs to save power. Continuous monitoring and maintenance of Air Conditioning, generators and other power appliances are being carried out to ensure that no power is being wasted under any circumstances



Emergency Power Backup & Smart Micro Grids





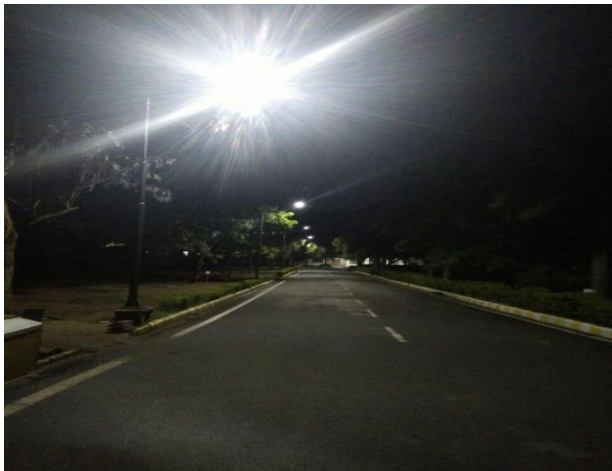
Summary Of Power Generation with the aid of Solar Panels
(Period from Jan 2020 to June 2021)

1	2				3		4		5	6
Month	KEB				Solar units generated		Total= (KEB & Solar)		KEB Rate	Saving
	A	B	C	D	A	B	A	B		
	Import Units KEB	Export Units from Solar	Actual Consumption of Units (2A-2B)	Amounts	Total Units	Amounts	Units (2C+3A)	Amounts (2D+3B)		
Jan-20	85600	3975	81625	7,81,752	72663	450511	154288	12,32,263	1429742	197479.4
Feb-20	81425	17675	63750	6,28,170	69004	427825	132754	10,55,995	1235333	179338.2
Mar-20	76300	19800	56500	5,60,793	66086	409733	122586	9,70,526	1132504	161977.8
Apr-20	44175	43150	1025	89,145	78676	487791	79701	5,76,936	758048	181112
May-20	41425	31200	10225	1,67,363	72832	451558	83057	6,18,921	786581	167660
Jun-20	39250	19400	19850	2,50,783	55177	342097	75027	5,92,880	724312	131431.6
Jul-20	37325	17950	19375	2,46,706	54009	334856	73384	5,81,562	710211	128649.2
Aug-20	42150	15525	26625	3,08,926	53409	331136	80034	6,40,062	767282	127220.2
Sep-20	47675	13850	33825	3,71,393	51447	318971	85272	6,90,364	813940	123575.6

Oct-20	57675	13600	44075	3,19,865	48968	303602	93043	6,23,467	741088	117621.4
Nov-20	60850	13525	47325	5,04,246	55990	347138	103315	8,51,384	1001671	150287
Dec-20	88025	10875	77150	7,65,070	56775	352005	133925	11,17,075	1298592	181517
Jan-21	91900	9575	82325	8,10,737	59987	371919	142312	11,82,656	1347010	164353.6
Feb-21	88350	9100	79250	7,83,602	67155	416361	146405	11,99,963	1383798	183835
Mar-21	102000	7850	94150	9,10,614	71841	445414	165991	13,56,028	1551538	195509.8
Apr-21	93750	8550	85200	8,31,847	69889	433312	155089	12,65,159	1454095	188936
May-21	48800	28900	19900	2,58,873	61159	379186	81059	6,38,059	795512	157453
Jun-21	44875	23025	21850	2,68,972	59765	370543	81615	6,39,515	785933	146418
Total	1171550	307525	864025	88,58,857	1124832	6973958	1988857	158,32,815	18717190	2884375

Proper Lighting

All the institutions campus of JSSAHE&R at Mysuru and Ooty are provided with LED lightings to promote security in the campus and to increase the quality of life by artificially extending the hours in which it is light and for the safety of hostel students.





Solar Panel

As initiative of smart campus drive by **Dr. C. G Betsurmath**, Executive Secretary, JSS Mahavidyapeetha, Mysuru all the constituent colleges have installed solar panels to reduce the electricity requirements as part of clean and renewable energy utilization. The total dependency for electricity of the college was at around **100% from the governmental agency (CESCOM)**. The dependency has reduced by **50 % or more after** the installation of Solar panels. The saving of electricity is recorded on regular basis which is given in the table below.



Solar panels at Hostels

Duration	KEB				Solar units generated		Total= (KEB & Solar)	
	Import Units KEB (A)	Export Units from Solar (B)	Actual Consumption of Units C= (A-B)	Amounts (D)	Units (E)	Amounts (F)	Units G=(C+A)	Amounts H=(D+F)
April-August 2021	62820	40830	21990	379425	80720	500464	102710	879889



JSS AHER has set up solar panels in order to reduce energy consumption

A **Natural Lighting System** has been fixed in the building within the Department, which absorb sunlight to save energy. The absorbed sunlight is allowed to reflect among the small panels and most of the light is not allowed to refract due to aluminum foiling around the channel, leading to concentration of light that is then allowed to pass through the channel into the rooms.



Replacement of **incandescent** bulbs with **LED** bulbs. The consumption of electricity in the campus was at around **45,000 watts** and now it is brought down to **31,000 watts**



➤ **Installed Photocell sensor to save electricity in the no men place**

We often leave the place without switching off lights. Therefore, electricity is getting wasted. The Photocell sensor identifies that there are no persons present inside the room, then light will be turned OFF automatically. If any person enters the room, automatically devices will be turned ON. As trail basis the effective working of sensor is placed at college elevator and the college corridor.



Awareness program to the students and faculties to conserve the electricity and other forms of energy.

Awareness is given on a regular basis to students and staff to conserve the electricity and sign board are placed to execute the same conserve the electricity.

- College encourages carpooling for staffs and students as an effort to save fossil fuels consumption. Many of the teaching and non-teaching are adopted car and bike pooling.
- Steam energy is used for cooking food at hostels.
- Availability of trained personal to monitor energy utilization effectively.
- Solar water heater at hostels
- AMC has been put in place to majority of the instruments which has facilitated reduced power consumption.



LED Bulbs in campus

Ensure universal access to affordable, reliable and modern energy services.

Increasing infrastructure and upgrading technology to provide clean and more efficient energy in all countries will encourage growth and help the environment.

Investing in solar, wind and thermal power, improving energy productivity, and ensuring energy for all is vital if we are to achieve SDG 7 by 2030.

The college has an excellent infrastructure for academic and residential purpose with the centralized gas facilities for laboratories and hostels. Exclusive high power transformer for stabilized voltage and generator machines to support uninterrupted power supply to the campus is available.

Outstanding infrastructure built in the serene campus with the extent of about 6.5 acres dedicated exclusively for the Pharmacy discipline makes the teaching learning process a pleasurable experience. The entire campus including the residential facilities is Wi-Fi enabled with uninterrupted power and water supply. 24x7 functioning state-of-the-art laboratories, specialized software's facilitate quality research in pharmaceutical sciences and practice. The other facilities include but not limited to, Smart class room, Simulation Labs, Model Pharmacy, Library with more than 10,000 print and digital resources and 'Clinical key'

database, Residential facilities for students and staff members, Indoor/outdoor sports facilities, Multipurpose auditorium and Health Centre in the campus. The other goal is to implement and to replace all phosphorous bulbs with the LED bulbs. In long term goal we look forward to implement electricity capacitor panel for the power conservation.



Energy Efficient LED Lights in Library and Campus

Increase substantially the share of renewable energy in the global energy mix.

The main goal of college is to implement solar street light at a pilot level. To replace all sodium vapour bulbs with the LED bulbs in a short time.



Energy Efficient Sensor Lights

Double the global rate of improvement in energy efficiency.

JSSCPO is working towards energy conservation and improving energy efficiency through using the energy-efficient LED light bulbs, sensor lights and using small burners or electrical water bath for laboratory and large burners for cooking.

Advantages of an Underground Cables: -

- Release with no electric field and will be engineered to release a less magnetic field than the overhead line.
- Have lower transmission losses.
- Ensure Small Voltage Drops.
- Protection from environmental stresses like wind, storms, and thunder.
- To install it requires a small band of land.
- Low susceptible to the contact of the severe weather.
- They have decreased the **EMFs** (Electric and Magnetic Fields) and therefore removes the potential health issues.
- There will be not any kind of lines that will disrupt your line of vision.
- You do not need worry while you are trimming the tree that you will experience a live wire.
- It is very hard to make sabotage or the illegal connections.
- There are very less chances to developing the faults and the maintenance costs is very low as well.
- Not easy damage

Lighting details

JSSMI Campus

SL.NO	Location	Ordinary light	LED light
1	AHER	0	100
2	Medical College	50	50
3	Dental college	85	15
4	Life science	90	10
5	Guest House	0	100
6	Boys hostel	0	100
7	Girls hostel	70	30

JSSCP Campus

SL.NO	Location	Ordinary light	LED light
1	Pharmacy College	50	50
2	Boys hostel	0	100
3	Girls hostel	75	25



Power Generator



Electrical Control System



Centralised gas supply system

Total Energy usage for the period from January 2020 to June 2021

Medical College & Dental College			JSS College of Pharmacy Mysuru	
(RR NO: HT - 166 & Contract Demand 450 KVA)			(RR NO: HT - 384 & Contract Demand 150 KVA)	
Month	Total= (KEB & Solar)		Total = (KEB & Solar)	
	A	B	A	B
	Units	Amount	Units	Amount
Jan-20	154288	12,32,262.60	28819.5	2,27,142.40
Feb-20	132754	10,55,994.80	39853.5	3,24,401.20
Mar-20	122586	9,70,526.20	36509	2,94,084.80
Apr-20	79701	5,76,936.20	17027	1,40,794.00
May-20	83057	6,18,921.40	19631	1,54,842.20
Jun-20	75027	5,92,880.40	17822	1,44,951.40
Jul-20	73384	5,81,561.80	15829.5	1,27,649.40
Aug-20	80034	6,40,061.80	15661	1,27,051.20
Sep-20	85272	6,90,364.40	18886.5	1,57,937.80
Oct-20	93043	6,23,466.60	24174.5	1,65,492.40
Nov-20	103315	8,51,384.00	26804.5	2,28,187.40
Dec-20	133925	11,17,075.00	32716.5	2,74,483.80
Jan-21	142312	11,82,656.40	34740.5	2,95,023.60
Feb-21	146405	11,99,963.00	38420.5	3,19,375.60
Mar-21	165991	13,56,028.20	41349.5	3,43,244.40
Apr-21	155089	12,65,158.80	27529	2,19,577.80
May-21	81059	6,38,058.80	11494.5	1,01,505.00
Jun-21	81615	6,39,515.00	11336.5	1,00,671.00
Total	1988857	1,58,32,815.40	458605	37,46,415.40

Total Energy Dependency in % from January 2020 to June 2021

Medical College & Dental College, Mysuru			JSS College of Pharmacy Mysuru	
(RR NO: HT - 166 & Contract Demand 450 KVA)			(RR NO: HT - 384 & Contract Demand 150 KVA)	
Month	Energy Dependency in %		Energy Dependency in %	
	A	B	A	B
	KEB	SRTP	KEB	SRTP
Jan-20	52.90	47.10	31.31	68.69
Feb-20	48.02	51.98	52.90	47.10
Mar-20	46.09	53.91	48.60	51.40
Apr-20	1.29	98.71	-16.65	116.65
May-20	12.31	87.69	13.83	86.17
Jun-20	26.46	73.54	17.84	82.16
Jul-20	26.40	73.60	6.96	93.04
Aug-20	33.27	66.73	8.24	91.76
Sep-20	39.67	60.33	30.78	69.22
Oct-20	47.37	52.63	36.70	63.30
Nov-20	45.81	54.19	47.20	52.80
Dec-20	57.61	42.39	50.64	49.36
Jan-21	57.85	42.15	56.45	43.55
Feb-21	54.13	45.87	52.57	47.43
Mar-21	56.72	43.28	55.16	44.84
Apr-21	54.94	45.06	29.26	70.74
May-21	24.55	75.45	-44.96	144.96
Jun-21	26.77	73.23	-41.48	141.48
Total	712.15	1087.85	435.36	1364.64

The JSSAHER has enhanced installation of clean energy technologies for light appliances across the sections including solar based lighting and heating systems. It has initiated to install energy efficient and less pollution emission technologies in laboratories and classrooms.

JSSAHER has initiated advanced research on the production of renewable energy using solid waste and catalysts based water treatment processes using natural sunlight as an alternative driving energy.

At the Institution level, solar panels have been installed which has considerably brought down the power consumption by atleast 50% compared to earlier years. In order to set an example, the institution shares some of the electricity generated by solar energy to the local electricity board. Proper signages have been installed advising the users to always switch off the electricity when not in use.

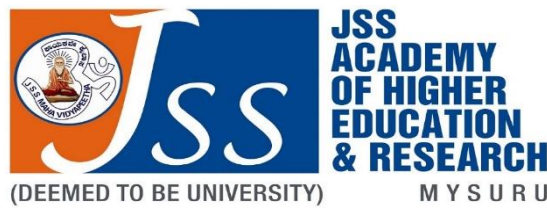
Most of the lights have been replaced by energy saving bulbs and LEDs to save power. Continuous monitoring and maintenance of Air Conditioning, generators and other power appliances are being carried out to ensure that no power is being wasted under any circumstances.

The Department of Environmental Science has been working on alternative, affordable and clean energy production. Dr. Shivaraju HP and his group succeeded in conversion of CO₂ into methane under electro catalysis processes and demonstrated improved biomethanation processes for the production of biogas that can be used as an alternative energy sources.

Activity planned

- Awareness program to the students and faculties to conserve the electricity and other forms of energy.
- Increase the use of solar energy in place of electricity wherever possible
- Once in week or 15 days to commute to the college by bicycle
- Reduce, Reuse, and Recycle Approach
- Organize a "No Impact Week at work to minimize our impact on different areas of the environment."

POLICIES RELATED TO SDG7



Construction & Campus Facilities Policy and Guidelines Manual

Aim:

This policy governs the practices and procedures for all building construction activities on the JSS Academy of Higher Education & Research campus.

Purpose

The purpose of this policy is to:

Establish central regulatory responsibility for the JSSAHER's campus.

Applies to all university-related facilities, regional, national & international wide.

Policy Concept:

This policy is intended to promote and monitor construction activities from occurring or being initiated by departments construction & engineering under General Administration and Development Section of JSSAHER ensuring that:

The applicable permits are obtained by the norms of the regional, state and government guidelines, norms and policies .

The work is planned and implemented in compliance with the applicable building Karnataka Construction Regulations and Government regulations.

JSSAHER'S space shall be managed, renovated, altered, etc., in a consistent manner in accordance with the applicable policies and procedures of the appropriate committees such as the General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER.

All required analyses and planning related to water, sanitation, electricity, solar energy panels, rain water harvesting provisions and all technology supporting sustainable environment are to be completed prior to the construction of the building .

The contractors being used are to be licensed and in contact with the appropriate Facilities Services staff under norms of Karnataka government on construction and construction labour. Appropriate professionals are to be used to design and engineer the work.

Changes in existing building systems are completed in a manner that do not adversely impact the systems overall operational efficiency.

The Procurement and Contract Services Office is contacted so the appropriate coordination for all appropriate contract services is completed.

The constituent units, shall commence any improvement, remodel, renovation, demolition or installation of equipment without first contacting General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER for consultation and coordination of work.

The constituent units representatives and building managers interested in initiating a construction project shall contact the General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER to coordinate the effort with Facilities Services prior to the commencement of work.

The constituent units shall initiate any work on building systems install any mechanical equipment or research equipment by coordinating the proposed work with General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER.

Any work requiring a permit needs to be coordinated with General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER prior to the work commencing.

Prior to the start of any renovation, alteration, etc., the General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER .No flooring or building materials shall be removed or demolished without first contacting without prior permission form Government

Prior to the start of any renovation, demolition, alteration, etc., Environmental Health and Safety shall be contacted to review the proposed project isolation plan to ensure the safety of university personnel, students, and the public.

All local exhaust systems used to control the exposure of humans to hazardous chemicals or other detrimental materials in the air shall be approved by Environmental Health & Safety Department of the Government.

Responsibly:

General Administration and Development Section of JSSAHER and Campus Maintenance Committee of JSSAHER shall be responsible to execute and motor the activities related to construction and development in the campuses of JSSAHER .

Registrar and Deputy Registrar of JSSAHER shall review and reinforce the policy as per the requirement of the Institution and Government.

Annexure & Reference:

1. URBAN DEVELOPMENT SECRETARIAT NOTIFICATION NO. UDD 556 MYAPRA 2013(1)DATED: 28-05-2014
2. RURAL DEVELOPMENT AND PANJAYAT RAJ NOTIFICATION NO: RDP 788 GPA 2014 DATED 17.03.2015
3. THE KARNATAKA REGULARISATION OF UNAUTHORISED CONSTRUCTION IN URBAN AREAS ACT, 1991.
4. <https://karbwrb.karnataka.gov.in/guidelines/en>



JSS ACADEMY OF HIGHER EDUCATION & RESEARCH, MYSURU

Energy Conservation & Recycling Policy

Purpose

In order to minimize energy usage, improve the efficiency of all energy/ resources (natural resources, water, electricity) consuming systems and equipment, and improve the environment in all facilities, JSS Academy of Higher Education & Research has adopted a energy / resources conservation and recycling policy.

Definitions

- Energy conservation : Energy conservation is a practice of decreasing the quantity of energy used and achieved through efficient energy use.
- Recycle: Recycle is a process of collecting and reprocessing materials that would typically be considered waste.

Responsible Office

Office of the Vice Chancellor, Registrar & Finance Officer

Policy

Conservation of energy and natural resources and recycling process is an integral part of JSS Academy of Higher Education & Research (JSSAHER) facilities' design and usage. The JSSAHER employs a variety of energy conservation, recycling, and other techniques to lessen the consumption of resources and achieve the lowest feasible life cycle costs. However, occupant health, safety, comfort, and program requirements shall always be the primary concerns. Energy conservation measures will be achieved by using the most cost-effective, energy-efficient approach with consideration given for flexibility of use and future remodeling convenience. Recycling efforts are encouraged at the Institution/department level.

Responsibilities

- A.** All faculty, staff, students, design consultants, and construction contractors must observe energy and resource conservation measures employed by the campus.
- B.** The Campus Facilities Maintenance & Management Authority- Deputy Registrar shall be the principal coordinator of all design disciplines, which includes responsibility for the implementation of this policy.
- C.** Constituent Colleges & Departments shall be responsible for internal energy conservation, recycling efforts.

Related Policies

The energy conservation and recycling policy of JSS Academy of Higher Education & Research (JSSAHER) follows :

- The Swachh Bharat Mission (Urban) guidelines- Government of India.
- National conservation strategy and policy statement on environment and development- Government of India.

Date of implementation

This policy will come into immediate effect from 11.10 .2016

Date of revision

10.09 .2020

JSS ACADEMY OF HIGHER EDUCATION & RESEARCH

CAMPUS MAINTENANCE COMMITTEE

Purpose:

Campus Maintenance Committee is to make sure that all facilities and maintenance in JSS Academy of Higher Education & Research, Constituent Colleges and Department are being addressed. This includes routine maintenance, cleaning, recycling, waste management, conservation and implementing new facilities.

Constitution:

The maintenance committee shall be constituted by :

1. Registrar , Jagadguru Sri Shivarathreeshwara University, Mysuru - **Chairman**
2. Deputy Registrar, Jagadguru Sri Shivarathreeshwara University, Mysuru – Member.
3. Vice Principal , JSS Medical College, Mysuru – Member.
4. Vice Principal, JSS Dental College & Hospital, Mysuru – Member.
5. Vice Principal, JSS College of Pharmacy, Mysuru – Member.
6. Vice Principal, JSS College of Pharmacy, Ooty – Member.
7. Coordinator, Dept of Health System Management Studies, Jagadguru Sri Shivarathreeshwara University Mysuru - Member.
8. Administrative Officer, JSS Medical College, Mysuru – Member.
9. Administrative Officer, JSS College of Pharmacy, Mysuru – Member.
10. Administrative Officer, JSS College of Pharmacy, Ooty – Member.
11. Administrative Officer/ Superintendent, JSS Dental College & Hospital, Mysuru – Member.
12. Resident Engineer, Jagadguru Sri Shivarathreeshwara University, Mysuru - Member.
13. Superintendent – Department of Water & Health –Faculty of Life Sciences, Jagadguru Sri Shivarathreeshwara University, Mysuru - Member.
14. Physical Cultural Director, Jagadguru Sri Shivarathreeshwara University, Mysuru- **Convener.**

The maintenance committee shall meet thrice a year (July/November/April) and additionally as needed. Calendar dates and location of meetings will be decided by the committee on a yearly basis. Decisions of the Campus Maintenance Committee shall come in to action only with the approval of the Registrar.

Coordinator-IQAC, JSSAHER , Mysuru , shall be a special invitee for all the meetings and activities of the committee.

Responsibilities:

1. Maintenance organisation, which relates to creating an organisational structure for facilities maintenance, which shall clearly define duties and responsibilities, and should vary with the complexity of the University, colleges and departments.
2. Maintenance inspection, which relates to building examination in order to prepare a maintenance plan and most importantly, gather information to form the basis for the maintenance programme, using various forms of inspection checklists for building structures including roofing, grounds and service systems.
3. Maintenance planning, which relates to formulating a maintenance strategy for achieving better use of facilities and minimising the cost of resources tied up in grounds and buildings.
4. Maintenance planning invariably includes maintenance policy formulation and aspects of maintenance funding.
5. To conduct meetings and to prepare and distribute meeting agendas and minutes of the meeting and to be familiar with University and Institutional structures, committee guidelines and activities.
6. To maintain vendor list related to Campus Maintenance.
7. To share resources amongst the constituent colleges and departments.
8. To review projections of future facility an infrastructure requirement.
9. To monitor and advise on the Greening of the campus, waste disposal & management /recycling process etc.
10. To contribute in conservation and beautification of campus and to coordinate the upkeep of guest houses.
11. To support strategies and activities related to “Smart Campus Policy of JSSAHER”
12. To help revision of “Energy conservation & recycle policy “with annual audit.
13. To conduct awareness program on sustainable development goals & conservation
14. To facilitate “Help Desk” for the visitors to University and Institutions.
15. To conduct annual self-evaluation of the performance of the committee and the effectiveness and compliance.



JSS UNIVERSITY

(Deemed to-be-University under section 3 of the UGC Act.)

Accredited 'A' Grade by NAAC

Sri Shivarathreeshwara Nagara, Mysore - 570 015, Karnataka, India

No: REG/QD -GN- 01/2015-2016/3013

Date : 30th June ,2016

Sir/Madam,

Sub: Constitution of "Campus Maintenance Committee" for Jagadguru Sri Shivarathreeshwara University, Mysuru, Reg.

Ref: Minutes of the 5th IQAC Meeting sent through email on 28th June ,2016.

With reference to the above subject, I am to inform you that Jagadguru Sri Shivarathreeshwara University, Mysuru, has constituted "Campus Maintenance Committee" with following members:

1. Registrar , Jagadguru Sri Shivarathreeshwara University, Mysuru - **Chairman**
2. Deputy Registrar, Jagadguru Sri Shivarathreeshwara University, Mysuru – Member.
3. Vice Principal, JSS Medical College, Mysuru – Member.
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13. Superintendent – Department of Water & Health –Faculty of Life Sciences, Jagadguru Sri Shivarathreeshwara University, Mysuru - Member.
14. Physical Cultural Director, Jagadguru Sri Shivarathreeshwara University, Mysuru- **Convener.**

The guidelines for Campus Maintenance Committee are enclosed herewith for your reference.

Anticipating your cooperation and support in this regard.

Thanking you.

Yours faithfully,

Phone : +91 821 2548392 | 2548393 | 2548400 | Fax : +91 821 2548394

Email : registrar@jssuni.edu.in | www.jssuni.edu.in



Jagadguru Sri Shivarathreeshwara University, Mysuru

Campus Maintenance Committee Guidelines

Name: Campus Maintenance Committee

Purpose:

Campus Maintenance committee is to make sure that all facilities and maintenance in the University, Constituent Colleges and University Department are being addressed. This includes routine and preventive maintenance, cleaning, recycling, waste management, implementing new facilities and upgrades.

Constitution:

The maintenance committee shall be constituted by :

1. Registrar , Jagadguru Sri Shivarathreeshwara University, Mysuru - **Chairman**
2. Deputy Registrar, Jagadguru Sri Shivarathreeshwara University, Mysuru – Member.
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The maintenance committee shall meet thrice a year (July/November/April) and additionally as needed. Calendar dates and location of meetings will be decided by the committee on a yearly basis. Decisions of the Campus Maintenance Committee shall come in to action only with the approval of the Registrar.

Coordinator-IQAC, Jagadguru Sri Shivarathreeshwara University, Mysuru , shall be a special invitee for all the meetings and activities of the committee.

1

PTO

Responsibilities:

1. Maintenance organisation, which relates to creating an organisational structure for facilities maintenance, which shall clearly define duties and responsibilities, and should vary with the complexity of the University, colleges and departments.
2. Maintenance inspection, which relates to building examination in order to prepare a maintenance plan and most importantly, gather information to form the basis for the maintenance programme, using various forms of inspection checklists for building structures including roofing, grounds and service systems.
3. Maintenance planning, which relates to formulating a maintenance strategy for achieving better use of facilities and minimising the cost of resources tied up in grounds and buildings.
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5. To conduct meetings and to prepare and distribute meeting agendas and minutes of the meeting and to be familiar with University and Institutional structures, committee guidelines and activities.
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7. To share resources amongst the constituent colleges and departments.
8. To review projections of future facility an infrastructure requirements.
9. To monitor and advise on the Greening of the campus, waste disposal & management /recycling process etc.
10. To contribute in conservation and beautification of campus and to coordinate the upkeep of guest houses.
11. To facilitate "Help Desk" for the visitors to University and Institutions.
12. To conduct annual self-evaluation of the performance of the committee and the effectiveness and compliance.





JSS Academy of Higher Education & Research
(Deemed to be University)
Accredited 'A+' Grade by NAAC
Sri Shivarathreeswara Nagara
Mysuru – 570 015, Karnataka, INDIA

JSS Academy of Higher Education & Research

Mysuru

“Waste disposal Policy”



*“Reduce – Recycle – Reuse” is a social responsibility, let us work together
for a better tomorrow*

Waste disposal Policy Statement

This policy document contains information on the procedure being followed at the JSS Academia of Higher Education & Research and its constituent colleges and departments. The document is prepared based on the Central Pollution Control Board, Govt of India and Karnataka State Pollution Control Board guidelines. The document will undergo revision as and when the central pollution control board makes amendments / changes and also as per the academia documentation policy. Sharing or copying the information in written, photocopy or any other mode without prior consent of the academia is discouraged.

JSS ACADEMY

Key personnel in waste disposal management

S No	Waste Disposal Activity	Function	Key Personnel	Contact details
1	Solid waste	Supervision of Collection and disposal	Mr Prashanth	9980613010
2	Green waste	Supervision of Collection and disposal	Mr Shivamanju	9886260635
3	E-waste	Supervision of Collection and disposal	Dr Ravindra	8105278665
4	Radioactive waste	Supervision of Collection and disposal	Dr Mahesh KP	9845189703
5	Biomedical waste	Supervision of collection and disposal of Biomedical waste disposal <ul style="list-style-type: none"> ▪ Collection ▪ Segregation at source ▪ Packing and Transport to central storage area ▪ Storage and Handover to CBMWTF 	Dr Saravana Babu C	9042222277
		Disposal	Mr Umesh	9900970844
		Updating of biomedical waste register		
		Updating and Display of reports on website		

JSS Academy of Higher Education & Research

JSS Academy of Higher Education & Research (JSS AHER), formerly known as JSS University, is a deemed to be university located in Mysore, Karnataka. It was established in the year 2008 under Section 3 of the UGC Act 1956. JSS AHER is recognized by MHRD and accredited with A⁺ Grade (CGPA of 3.47 out of 4) by National Assessment and Accreditation Council (NAAC) during re-accreditation in 2018. National Institutional Ranking Framework (NIRF) has listed JSS AHER at 37 ranks in the Universities Category. JSS AHER has the credit of being the top YOUNG University in the Karnataka State Universities Rating Framework (KSURF).

JSS AHER focuses on Medical and health-sciences studies through its constituent colleges, JSS Medical College, JSS Dental College & Hospital, JSS College of Pharmacy, Mysuru and JSS College of Pharmacy in Ootacamund, Faculty of Life Science. With a view to extend the academic horizon in the field of Health Sciences, Faculty of Life Science & Faculty of Health System Management was formed. Water health, HSMS, W&H

WASTE MANAGEMENT POLICY

Scope

This document provides information on the procedure being followed on waste management in the Deemed to be University

Applies to

All the teaching and non-teaching faculties, contractors and housekeeping staff

Preamble

Definitions

"Authorization" means permission granted by the Deemed to be University for the generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste in accordance with the rules and guidelines issued by the Central Pollution Control Board, Govt of India.

"Authorized person" means a person authorized by the Deemed to be University to generate, collect, receive, store, transport, treat, process, dispose or handle bio-medical waste in accordance with the rules and guidelines issued by the Central Pollution Control Board, Govt of India

"Biological" means any preparation made from organisms or micro-organisms or product of metabolism and biochemical reactions intended for use in the diagnosis, immunization or the treatment of human beings or animals or in research activities

"Bio-medical waste" means the wastes generated during the diagnosis, treatment or immunization of human beings or animals or research activities

"Bio-Medical Waste Treatment and Disposal Facility" means the facility wherein treatment, disposal of bio-medical waste or processes incidental to such treatment and disposal is carried out, and includes common bio-medical waste treatment facilities

“Handling” in relation to bio-medical waste includes the generation, sorting, segregation, collection, packaging, storage, loading, transportation, unloading, treatment, destruction, transfer, disposal of waste.

“Healthcare facility” means a place where diagnosis, treatment or immunization of human beings is provided irrespective of type and size of health treatment system, and research activity

"Occupier" means a person having day to day administrative control over the clinic / lab generating bio-medical waste, which includes a hospital, mortuary, anatomical wastes, pathological laboratory, animal house, blood bank, irrespective of their system of medicine

"Operator of a common bio-medical waste treatment facility" means a person who owns or controls a Common Bio-medical Waste Treatment Facility (CBWTF) for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste.

“Prescribed authority” mean the State Pollution Control Board in respect of State and Pollution Control Committee in respect of Union Territory. In Karnataka it is Karnataka State Pollution Control Board (KSPCB)

“Point of Generation” means the location where wastes initially generate and accumulate.

“Storage” means the holding of biomedical waste for a temporary period at the end of which the bio-medical waste is treated or disposed.

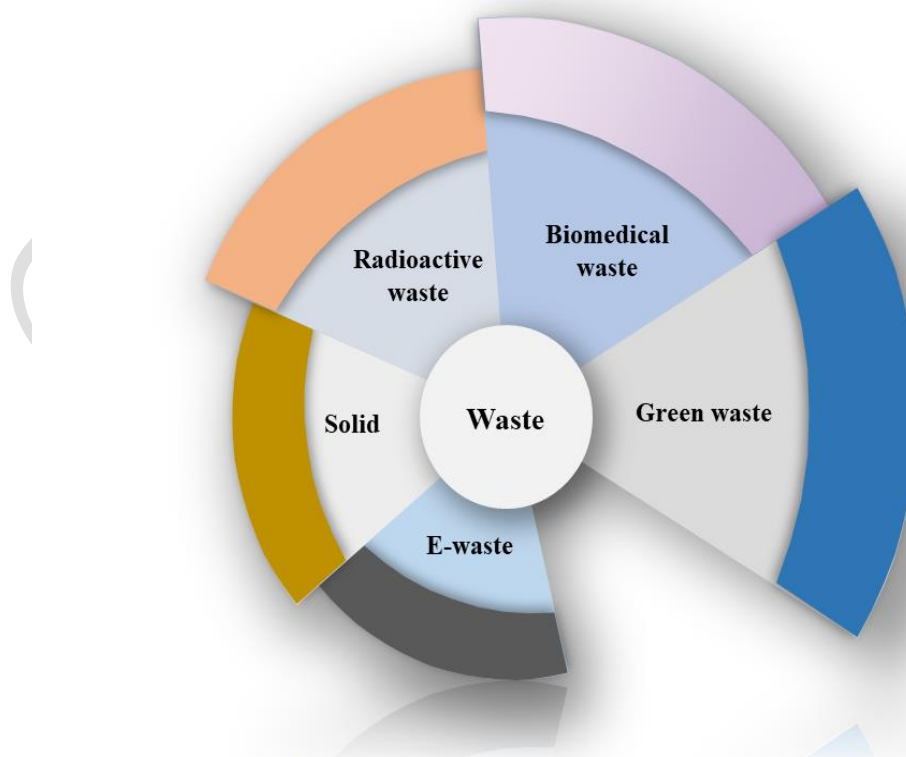
“Treatment” means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological characteristics or composition of any hazardous waste

“Waste” any substance which is discarded after the primary use, or it is worthless, defective, and of no use

Policy

Classification of waste generated from the University, hospital and laboratories:

- **General solid wastes:** Domestic garbage, food and food packing materials, papers and cardboards, construction and demolition debris, sanitation residues, packaging materials, usually disposed through municipality
- **Bio-medical wastes:** Solid or liquid wastes including containers, intermediate or end products generated during diagnosis, treatment & research activities of medical sciences.
- **Green waste:** Wastes generated from gardens and herbal gardens activities. These substances are mostly biodegradable.
- **Radioactive wastes:** Waste containing radioactive materials. Usually these are byproducts of nuclear processes. e.g. radio-isotopes, chemical sludge etc.
- **E-wastes:** Electronic wastes generated from electrical or electronic devices. Electronic scrap components, such as CRTs, may contain contaminants such as Pb, Cd, Be or brominated flame retardants.



Procedure

General Wastes

It constitutes all the waste other than bio-medical wastes and which has not been in contact with any hazardous or infectious, chemical or biological secretions and does not includes any waste sharps. This waste consists of mainly:

- 1) Newspaper, paper and card boxes (dry waste)
- 2) Plastic water bottles (dry waste)
- 3) Aluminum cans of soft drinks (dry waste)
- 4) Packaging materials (dry waste)
- 5) Food Containers after emptying residual food (dry waste)
- 6) Organic / Bio-degradable waste - mostly food waste (wet waste)
- 7) Construction and Demolition wastes

These general wastes are further classified as dry wastes and wet wastes and should are collected separately. The quantity of such waste is around 80 % to 90 % of total waste generated from the University, hospital and laboratories.

Food wastes

Food wastes from the hostels are collected in closed containers in respective collection area and are taken to piggery to feed the pigs. Food waste is disposal ensured through third party contract. Pilot trials under process to convert food waste in to organic manure and biogas

Green waste

The dried / wet plants materials such as leaves, stem, trunk, roots, flowers etc collected or cut or shred from the garden. Approximately 20 tonnes per year green waste is generated from the campus. The collected materials are processed in pits and approximately 12 tonnes of manure are prepared from the green wastes which are used for gardening purpose spread over in different locations of the campus.

Construction and Demolition waste

As part of infrastructure development in the Deemed to be University, as and when renovation or new construction are planned, the solid debris generated are cleared from the campus through the contractors taking-up the construction work. These wastes are disposed through trucks and used as landfill (approximately 5 acre) at Belavatha site located 1 km from the main campus

E-waste

Electronic wastes – computers, televisions, circuit boards, hard disks, printers and copiers, used batteries, which are not covered under biomedical wastes are disposed as and when such wastes are generated as per the provisions laid down under E-Waste (Management) Rules, 2016, Batteries (Management & Handling) Rules, 2001, and Rules/guidelines under Atomic Energy Act, 1962 respectively. This is outsourced through third part contract.

Radioactive isotopes

Dept of Radiology, JSS Dental College and Hospital, is practising a safe way of radiology waste disposal as required by the Bhabha Atomic Research Centre (BARC), Govt of India, since decades. Following are the radiology wastes generated at JSSDC & H

1. Fixing Solution.
2. Lead foils.
3. Radiographs (X- Ray Hard copies).
4. Developer Solution.

Depleted Fixing solution is given to a private agency party (Amaron, Pit stop) to recycle and extract silver from it. The same is followed in the case of x-ray films once, which were collected for so many years excluding the last 10 years record. Lead foils are collected over a period of time and are given to battery manufacturers for recycling. Depleted Developing solution is with excessive water and disposed in drains as suggested by BARC.







Bio-Medical Waste Management

"Bio-medical waste" means waste that are generated during diagnosis, treatment or immunization of human beings or animals or research activities or in the production or testing of biologicals. Medical waste includes all the waste generated from the Health Care Facility which can have adverse effects on the human health or to the environment in general if not disposed properly. In general, the quantity of biomedical waste will be 5% to 10% of total waste generated from the campus, hospitals and laboratories. These wastes consist of the materials originated patient or animals blood, secretions, infected parts, biological liquids such as chemicals, medical supplies, medicines, lab discharge, sharps metallic and glassware, plastics etc.

Bio Medical Waste Management Rules, 2016 categorizes the bio-medical waste generated from the health care facility into four major categories based on the segregation pathway and colour code:

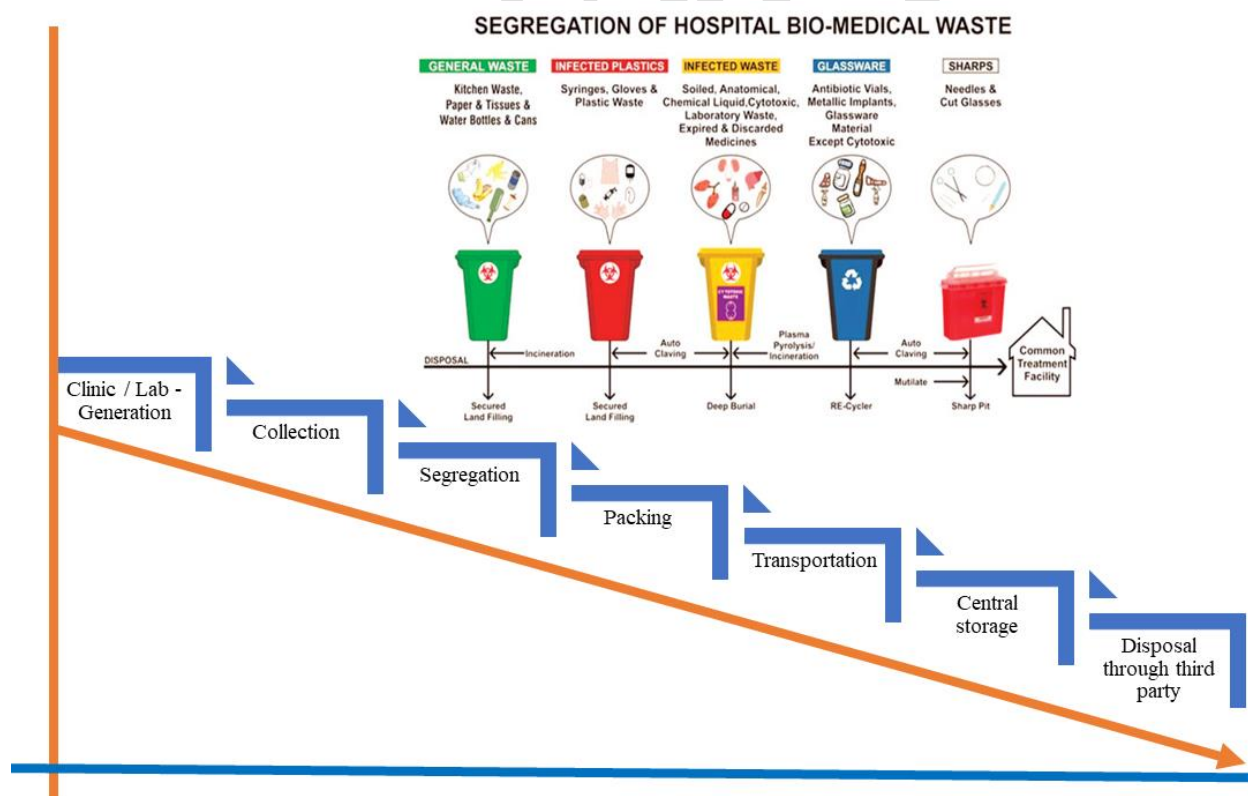
1. **Yellow Category**
2. **Red Category**
3. **White Category**
4. **Blue Category**
5. **Black Category**

S.No	Category	Type of waste	Color & Type of container
1	YELLOW	<ul style="list-style-type: none"> ➤ Human Anatomical Waste ➤ Animal Anatomical Waste ➤ Soiled Waste ➤ Discarded or Expired Medicine ➤ Microbiology, Biotechnology and other clinical laboratory waste ➤ Chemical Waste ➤ Chemical Liquid Waste 	<p>Yellow colored Non-Chlorinated Plastic Bags (having thickness equal to more than 50 μ) or containers</p>  <p>Note (i) Infected secretions, aspirated body fluids etc from laboratory are disinfected before mixing with another wastewater (ii) Liquid chemical wastes are pre-treated/ neutralised before mixing with other wastewater from hospital.</p>
2	RED	<ul style="list-style-type: none"> ➤ Contaminated Waste (Recyclable) 	<p>Red Colored Non-Chlorinated Plastic Bags (having thickness equal to more)</p> 
3	WHITE	<ul style="list-style-type: none"> ➤ Waste Sharps including metals 	<p>White Colored translucent, puncture proof, leak proof, Temper Proof containers</p> 
4	BLUE	<ul style="list-style-type: none"> ➤ Glassware ➤ Metallic Body Implants 	<p>Cardboard boxes with blue colored marking or blue colored puncture proof, temper proof containers</p> 

BIOMEDICAL WASTE SEGREGATION

Biomedical waste generated from the hospital and laboratories are segregated at the point of generation as per the colour coding stipulated under Schedule I of BMWM Rules, 2016.

- Personnel Protective Equipment are provided to the bio-medical waste handling staff.
- Waste are segregated at the point of generation of source and not in later stages. “Point of Generation” means the location where wastes initially generate, accumulate and is under the control of doctor / nursing staff / lab etc. who is providing treatment to the patient / animals and in the process generating bio-medical waste.
- Posters / placards for bio-medical waste segregation are installed at the point of generation.
- Adequate numbers of colour coded bins / containers or bags are available at the point of generation of bio-medical waste.



BIO MEDICAL WASTE COLLECTION

Time of Collection

- Bio-medical waste should be collected on daily basis from each ward of the hospital / lab at a fixed time. There can be multiple collections during the day. All the biomedical waste should be collected, segregated, packed and sent to central biomedical waste storage every evening before 4.30 pm
- Clinics and labs should ensure collection, transportation, and disposal of bio-medical waste within 48 hours.
- Bio-medical waste bags and sharps containers should be filled to no more than three quarters full. Once this level is reached, the bags are tied or sealed with plastic tags.
- Replacement bags or containers are available at each waste-collection location so that full ones can immediately be replaced.
- All the bags and containers to be transported to CBWTF are labeled with following details:
 - Date of Generation
 - Type of waste category
 - Dept name
 - Contact Person Name and Phone Number

Interim Storage

Interim storage of biomedical waste is discouraged in the clinics / labs

- If waste is needed to be stored on interim basis in the departments it is stored in the dirty utility/sections.
- In absence of dirty utilities/ sections such BMW must be stored in designated place away
- No waste is in patient care area / working area and procedure areas

General waste should not be collected at the same time or in the same trolley in which bio-medical waste is collected.

Labeling

All the bags/ containers/ bins used for collection and storage of bio-medical waste, are labelled with the warning Symbol of Bio Hazard or Cytotoxic Hazard as the case may be as per the type of waste in accordance with the BMWM Rules, 2016.



Bio-Hazard Label



Cyto-Toxic label

In-house Transportation of Biomedical waste

Transportation Trolleys & Carts

In-house transportation of biomedical waste from site of waste generation/ interim storage to central waste collection, with in the premises is done in closed trolleys/containers fitted with wheels for easy maneuverability. Such trolleys or carts are dedicated only for the purpose of biomedical waste transportation.



Waste Collection Cart



Waste Transport Trolley for a Particular category of waste

Route of transportation is planned in such a way that:

- Transportation does not occur through traffic and high-risk areas
- Supplies and waste are transported through separate routes
- Central waste collection area is accessed easily through the route adopted

Central waste collection area – for temporary storage

A central collection center situated within its premises for storage of bio-medical waste, till the waste is transported for treatment and disposal to CBMWTF. Center storage is manned and is under lock and key under the responsibility of a designated person. Central collection area has proper ventilation through the use of exhaust fan, hand wash area, weighing balance etc.

- Location of central waste collection facility is away from the public/visitors' access.
- The space allocated for collection is sufficient for the quantity of waste generated from premises
- Space is sufficient to store at least two days generation of waste
- Center has a concrete ramp for easy transportation of waste collection trolleys
- Flooring is of tiles with slope so as to ease the cleaning of the area
- Center has good ventilation through the use of exhaust fan and by use of wire meshes window
- Central storage station ensured for fire hazard like installation of fire extinguisher, smoke detector etc.
- Water supply is provided for cleaning and washing of this station containers. The drainage from the storage and washing area is routed to the effluent treatment plant (ETP).
- Sign boards indicating relevant details such as contact person and the telephone number is provided.
- It is ensured that no general waste is stored in the central waste collection area.
- Healthcare facilities need to maintain the record of waste generated and handed over to the authorized recycles.
- Centre is protected from stray animals in the academia and has installed cattle traps at main gate
- Pest control program is in place

Colour codes for Biomedical waste collection and Packing

				
<ul style="list-style-type: none"> ▪ Human and animal anatomical wastes ▪ Soiled wastes, ▪ Discarded or expired medicines ▪ Chemical wastes, ▪ Blood and body fluids ▪ Microbiology / Biotechnology wastes 	<ul style="list-style-type: none"> ▪ Contaminated waste (recyclable) 	<ul style="list-style-type: none"> ▪ Sharps including metals ▪ Needles ▪ Scalpels ▪ Blades 	<ul style="list-style-type: none"> ▪ Broken and contaminated glass including vials and ampoules ▪ Metallic body implants 	<ul style="list-style-type: none"> ▪ Food items ▪ Papers / paper plates, ▪ Water bottles, etc

References

- <https://kspcb.gov.in/aboute.html> (Bio-Medical Waste Management Rules, 2016)
- <https://kspcb.gov.in/aboute.html> (Construction & Demolition Waste Management Rules, 2016)
- <https://kspcb.gov.in/aboute.html> (E-waste Management Rules 2016)
- <https://kspcb.gov.in/aboute.html> (Solid Waste Management Rules, 2016)
- <http://www.barc.gov.in/randd/rwm.html> (Bhabha Atomic Research Centre)

JSS AHER



Jagadguru Sri Shivarathreeshwara University , Mysuru

Transport Policy

STATEMENT OF POLICY

All vehicles purchased by Jagadguru Sri Shivarathreeshwara University, shall be managed and governed in accordance with this policy. The University shall operate its vehicle according to a pool system.

PURPOSE

The Transport Policy provides the University with a standard procedure for the acquisition, enhancement, use, control, maintenance, repair and disposal of the University's vehicles and for the management of related forms of transport engaged for University activities.

DEFINITIONS

- **'University vehicle'** is defined as any driven vehicle, including buses, cars , vans, jeeps, bikes etc owned by the University and registered in the name of the University/Constituent colleges.
- **'Authorised User'** is any member of the University or associate authorised by the Vice Chancellor& Registrar to use a University vehicle for University official purposes.
- **'Accountable items'** are the vehicle log book, vehicle keys, navigational equipments etc.
- **'Notifiable Event'** is an accident or incident involving damage to a University vehicle.
- **'University'** refers to Jagadguru Sri Shivarathreeshwara University.
- **'Authorised Driver'** refers a member of staff authorised to driver a University Vehicle.
- **'Authorised Service Providers'** refers to an authorised fully licensed and registered service provider.

AUTHORITY

The Vice-Chancellor & Registrar holds delegated authority from, and is responsible for all aspects of the University's Transport Policy.

RESPONSIBILITY

The responsibility for the Transport Policy rest with the Vice-Chancellor .

The implementation of the Transport Policy rests with the Principal through the Registrar for:

- Management of the University's /Institution's vehicles
- The monitoring and on-going review of the Transport Policy
- Provision of central support services to facilitate the effective management of the Transport Policy

The Campus Maintenance Authority- Deputy Registrar will make adequate budgetary provision to meet the initial purchase and replacement cost and such annual provision to meet the cost of registration, traffic accident charge, comprehensive insurance, maintenance, repair and operating costs of all vehicles of the University.

ROLE OF THE TRANSPORT OFFICER

The Transport Officer shall:

- record on a central database all vehicle details and relevant information
- maintain pick up and drop schedule with time table of all the constituent colleges and departments
- maintain vehicles in a safe and roadworthy condition at all times
- maintain vehicles in accordance with the manufacturer's recommended service schedule by an authorized service provider
- direct that vehicles be operated only in accordance with the manufacturer's instructions
- direct that continuing arrangements for the proper garaging and/or securing of vehicles are effected;
- be responsible for the interior and exterior cleanliness of vehicles;
- maintain a register of Authorised Users;
- direct that vehicles are used only by Authorised Users;
- direct that vehicles are never used for personal purposes;
- direct that only members of the University or other persons specifically authorised by the Section Head / Dean /Principal of colleges / Heads of University department or their nominee travel in University vehicles
- liaise with the Deputy Registrar regarding any and all damage as a result of accidental or deliberate act and organise effective repairs by a suitable repairer at the earliest opportunity
- direct that vehicles be provided with a vehicle log book which is maintained and submitted on a weekly/monthly basis to the Deputy Registrar.
- direct that all elements of this policy, as amended from time to time, are complied with
- ensure that smoking, administration of illicit drugs, betel nut chewing or consumption of alcohol is not conducted in vehicles
- provide a certification, each year for annual accounts purposes that, vehicles have been operated in accordance with this policy in the preceding calendar year and
- be responsible to ensure the University Logo is affixed to all University vehicles.

AUTHORISED USERS

Authorised Users will be required to complete an Authorised User Undertaking, as amended from time to time, prior to first use of any vehicle.

VEHICLE STANDARDS AND SPECIFICATIONS

All Vehicles purchased by the University shall be listed in the Schedule to this Policy.

PURCHASE/DISPOSAL/REPLACEMENT

All vehicles will be purchased by the Deputy Registrar & Finance Officer in consultation with the Vice-Chancellor. The procedure for purchase and disposal of University vehicles will be in accordance with the University's Finance regulation as amended from time to time.

OPERATING PROCEDURE

- All vehicles will be pooled and garaged at the Property and University Campus/ Compound and any authorised location as approved by the Vice-Chancellor.
- For the use of any University vehicle, a booking will be made by Constituent Colleges and University Departments through a time schedule chart and will be recorded in an appropriate Vehicle log book by the Transport Officer.
- The Authorised Driver will be provided with the accountable items for the vehicle by the Transport Officer.
- At the completion of the period of authorised use, the Authorised Driver will complete the trip record in the vehicle log, return the accountable items to the Transport Officer, report any Notifiable Event, provide any receipt of expenditure and advise the current location of the vehicle.

USE OF PRIVATE VEHICLES ON UNIVERSITY BUSINESS

- Use of private vehicles on University business is discouraged.
- The University will not accept any liability of whatsoever nature which may arise from use of a private vehicle on University business.

TAXIS/ HIRING

The Officers of the University/ Principal/ Dean/ Head of the Colleges and University department may authorize the use of taxis/hired car at their discretion on a limited / need basis and not on regular basis.

INSURANCE

- The University keeps operative comprehensive insurance for all registered University vehicles which provide insurance cover and indemnity, the benefit of which is available to authorised users of those vehicles.
- Under the terms of its policy no insurance cover is provided when a University vehicle is driven by:
 - a. an unauthorized driver
 - b. a unauthorized driver under the influence of drugs
 - c. a unauthorised driver under the influence of alcohol exceeding the legal limit
 - d. an unlicensed driver with the knowledge of the University.
- In any of the instances listed above, all costs to repair damage are to be borne by the driver.
- The Transport Officer is responsible for coordinating all vehicle insurance claims and subsequent repairs.

PERSONAL LOSS/DAMAGE

- The University's insurance cover does not apply to unauthorised use of vehicles or in cases where conditions of use have been breached.
- The University will not accept liability for any damage, injury, loss or theft involving use of University vehicle where that damage, injury, loss or theft is not covered by the University's insurance policies.

NON-COMPLIANCE

Use of a University vehicle under this policy is a privilege and not a right. Noncompliance with the policy may result in the withdrawal of usage entitlement and, where appropriate, the instigation of disciplinary proceedings.



SMART CAMPUS POLICY

INTRODUCTION:

JSS Academy of Higher Education & Research, Mysuru has established its state of art Campus using cutting edge technology. It has achieved smart campus status in implementing the below technologies like:

1. Smart Physical Security and Surveillance “Safety & Security”
2. Smart Wi-Fi Enabled Campus “Connectivity and Digitization”
3. Smart Buildings “Establishment & Development”
4. Smart Recycling Process “Waste, Water, Air Management”
5. Smart Working & Transportation System “Services & Connectivity”.
6. Smart Energy Conservation and Utilization practice “Water, gas, electricity & infrastructure”
7. Smart Environment Management “Green environment resilient”
8. Smart Hostel & Smart Canteen management “Food & Health”
9. Smart Teaching & Learning “Education, learning & digitization”
10. Smart Extra Activities “Sports, cultural & Recreation”
11. Smart Outreach Activities “Social Service & Connectivity”

I. OBJECTIVE:

- Embed the use of smart technology into daily life of the campus; providing an opportunity for the development and application of innovation and technology to support a smart campus.
- Integrate an enhanced process and program focused on materials, security, health, transport, energy and environmental management.
- Focus on maintaining “Eco friendly institution” thorough best practice.
- Provide world class facilities and enabling nationally and internationally renowned industrial/institutional partners to co-locate on the campus.

II. SMART CAMPUS INITIATIVES:

a). Over all activities:

- The JSS Academy of Higher Education & Research implemented CCTV Cameras regarding students’ day and night from the year2010.
- The surveillance has built in analytic and intelligence for immediate remedial measures.
- Students are always connected to smart Wi-Fi.
- Healthy environment to support the mental, physical, and social wellbeing of the students and staff of the JSS Academy of Higher Education & Research.
- Daily power and water consumption data per student and room basis captured and analyses for reducing consumption cost.
- Smart help system for students to attend to all their hostel requirements on the services front.

b). Students Centric Smart Campus:

- Students are fully safe and secure with homely atmosphere and are being monitored round the clock.
- Students have dedicated band width with high-speed internet both on campus and hostel rooms.
- Smart Metering has given lot of data in terms of consumption pattern based on which several optimization measures have been implemented.
- Smart portal has a great impact on both students and other stakeholders who are directly involved in daily hostel operations.

c). ICT Based Smart Campus:

- Physical security of students in the campus was a big challenge.
- 400 CCTV cameras are always in operations for surveillance.
- Internet plays a vital role in enabling students to pursue their academic goals. Internet with adequate band width was provided to make the campus Wi-Fi enabled.
- Optimization and improvement can only be brought about by identifying consumption patterns. The goal was to reduce the consumption of water and electricity to the lowest levels possible. Smart Metering was implemented for taking optimal decisions.
- Many students join every year. JSS Academy of Higher Education & Research needed a SMART portal where in all services are taken care centrally from student entry in hostel and to their exit. Smart Portal was always made operational for connectivity with students.

d). Environment Friendly Smart Campus:

- In order to minimize energy usage, improve the efficiency of all energy/ resources (natural resources, water, electricity) consuming systems and equipment, and improve the environment in all facilities, JSS Academy of Higher Education & Research has adopted a energy / resources conservation and recycling policy.
- Conservation of energy and natural resources and recycling process is an integral part of JSS Academy of Higher Education & Research facilities' design and usage.
- The JSS Academy of Higher Education & Research employs a variety of energy conservation, recycling, and other techniques to lessen the consumption of resources and achieve the lowest feasible life cycle costs.
- Energy conservation measures will be achieved by using the most cost-effective, energy-efficient approach with consideration given for flexibility of use and future remodeling convenience. Recycling efforts are encouraged at the Institution/department level.
- All faculty, staff, students, design consultants, and construction contractors observe energy and resource conservation measures employed by the campus.
- The Campus Facilities Maintenance & Management Authority- Deputy Registrar shall be the principal coordinator of all design disciplines, which includes responsibility for the implementation of this policy.
- Constituent Colleges & Departments are responsible for internal energy conservation, recycling efforts.
- The Transport Policy provides the JSS Academy of Higher Education & Research with a standard procedure for the acquisition, enhancement, use, control, maintenance, repair, checking fuel efficiency and disposal of the JSS Academy of Higher Education & Research's vehicles and for the management of related forms of transport engaged for official purpose.

III. LONG TERM GOAL:

The long-term strategy of the JSS Academy of Higher Education & Research focuses on the creation of a world-changing, connected, healthy and vibrant JSS Academy of Higher Education & Research campus. Within this the JSS Academy of Higher Education & Research will concentrate on:

a). Digital Environment

- Open, flexible, integrated, interoperable, secure, and scalable ICT architecture.
- Sense, capture, monitor and evaluate data to support and study the performance of the campus in real time.

b). Integrated Urban Energy Systems

- Low carbon, low impact energy in a complex urban environment, focusing on generation, storage, distribution, and management.

c). Data-driven Infrastructure Innovation

- Resilient infrastructure systems.
- Innovation in infrastructure design and delivery.
- Building Information Modelling (BIM) for design and life-cycle performance.

d). Health & Wellbeing

- Evaluate, understand, and improve the physical environment
- Develop new practices for workplace wellbeing.
- Develop the technology, including wearable technology, to measure and influence health related behavior.

e). Student Experience and Pedagogy

- Data-driven services and spaces for an improved student experience.
- Technology-enabled learning & teaching (including active learning, interactive teaching, flexible study).

IV. AUTHORITY:

The Vice-Chancellor, Registrar & Deputy Registrar of JSSU holds delegated authority and is responsible for all aspects of the JSS Academy of Higher Education & Research's "SMART CAMPUS POLICY".

The Smart Campus Policy of JSS Academy of Higher Education & Research follows:

- The Swachh Bharat Mission (Urban) guidelines, Government of India.
- National conservation strategy and policy statement on environment and development, Government of India.
- National Cyber Security Policy, Ministry of Communication and Information Technology, Government of India.



SMART CAMPUS SUPPORTING SUSTAINABLE DEVELOPMENT GOALS

SOCIAL RESPONSIBILITY - TOUCHING THE LIVES OF MILLIONS

JSS AHER'S Social Responsibility is an approach of ethical and intelligent management, which involves both its impact on its human, social and natural context, and its active role on the promotion of Sustainable Human Development of the country. Within this approach, "Sustainable Campus" is a strategy that strives to reduce the ecological footprint of the Institution via a rational use of resources and to educate the JSSAHER community on the ethics of sustainability.

INITIATION OF THE CONCEPT OF SMART CAMPUS

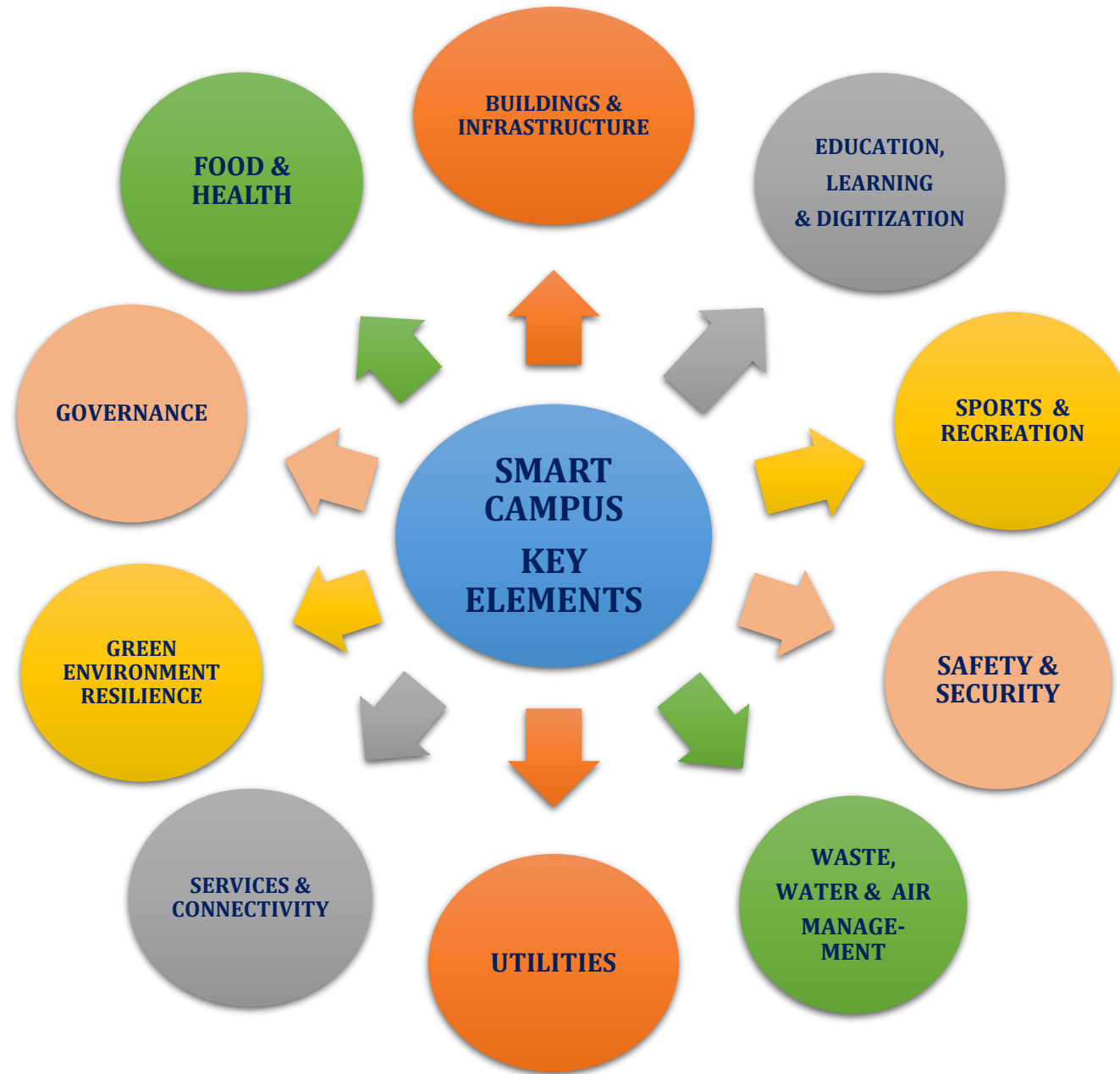
First Meeting on 29-11-2017

**Meeting on 16-04-2020 & 03.04.2021
To take measures in protecting the
campus from COVID 19 Pandemic**

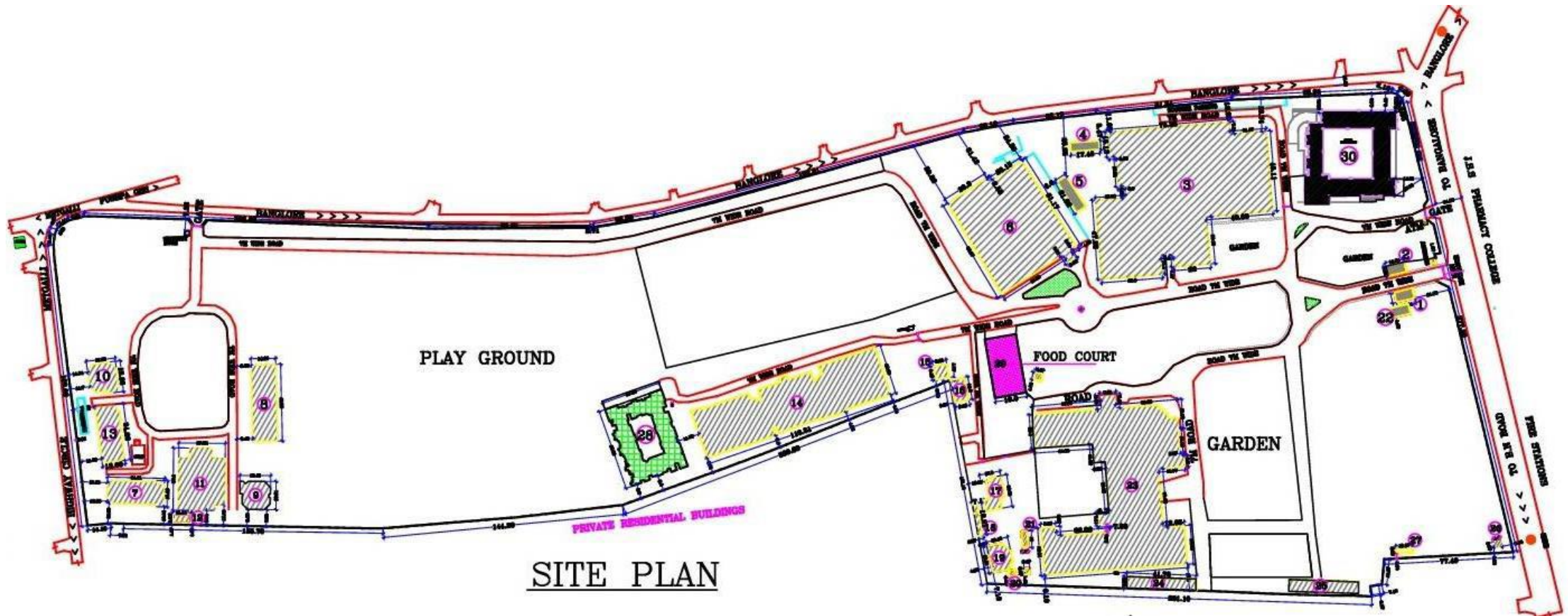
Key Elements of a Smart Campus

- 1. BUILDINGS**
- 2. EDUCATION & LEARNING**
- 3. SPORTS & RECREATION**
- 4. SAFETY & SECURITY**
- 5. WASTE, WATER, AIR MANAGEMENT**
- 6. UTILITIES – WATER, GAS, ELECTRICITY**
- 7. INFRASTRUCTURE**
- 8. SERVICES**
- 9. GREEN ENVIRONMENT RESILIENCE**
- 10. WORKING**
- 11. RETAIL**
- 12. FOOD & HEALTH**
- 13. CONNECTIVITY & DIGITISATION**

- 1. FOOD & HEALTH**
- 2. CONNECTIVITY & DIGITISATION**
- 3. BUILDINGS & INFRASTRUCTURE**
- 4. ONLINE EDUCATION, LEARNING**
- 5. MENTAL HEALTH & RECREATION**
- 6. WASTE, WATER, AIR MANAGEMENT**
- 7. SERVICES, CONNECTIVITY & RETAIL**
- 8. GREEN ENVIRONMENT RESILIENCE**
- 9. SAFETY & SECURITY**
- 10. GOVERNANCE**



JSS MEDICAL INSTITUTIONS CAMPUS OF JSSAHER TOPOGRAPHICAL VIEW



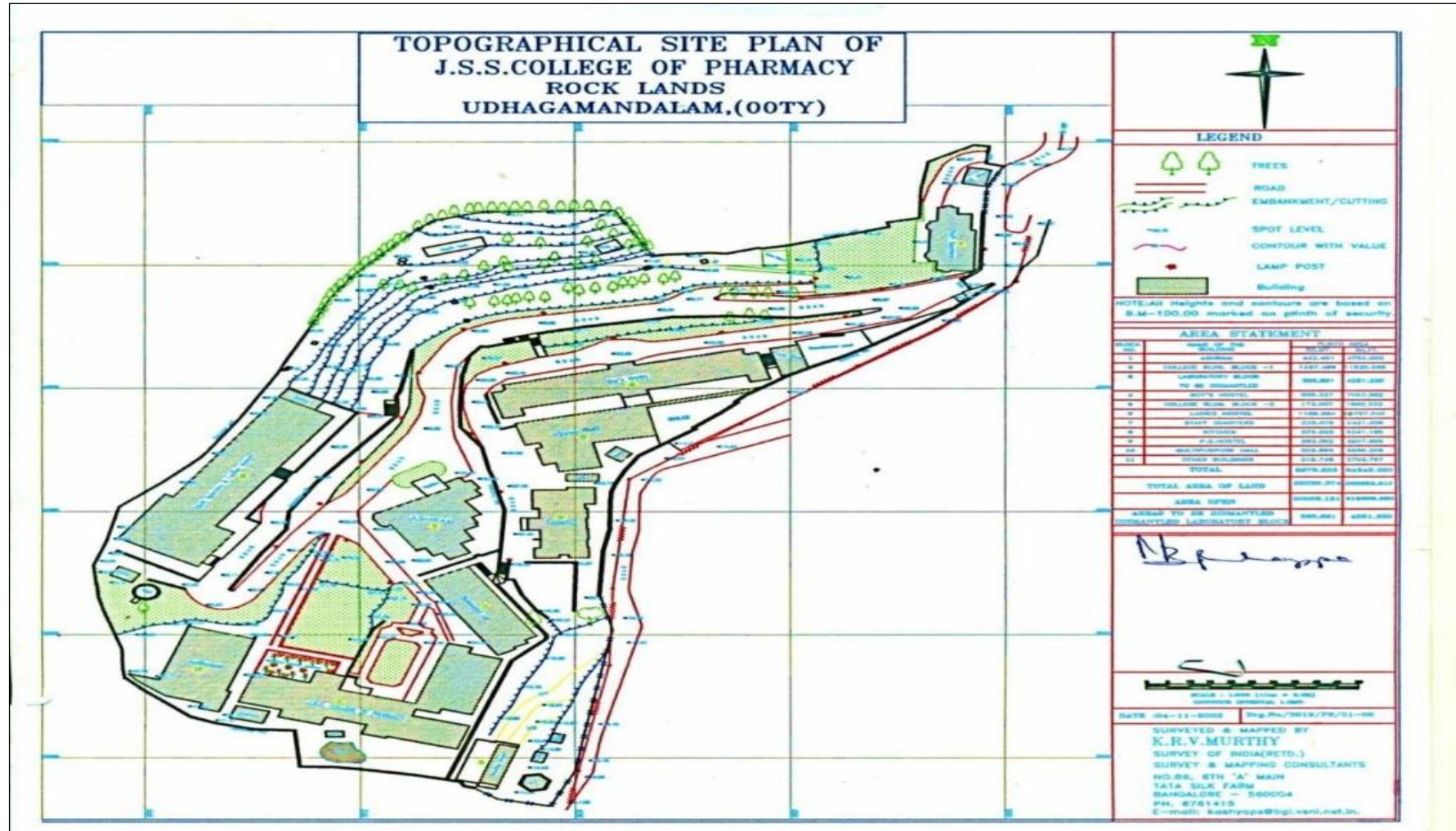
TOTAL AREA STATEMENT

AREA in Sq. Mt - 1,76,459.63

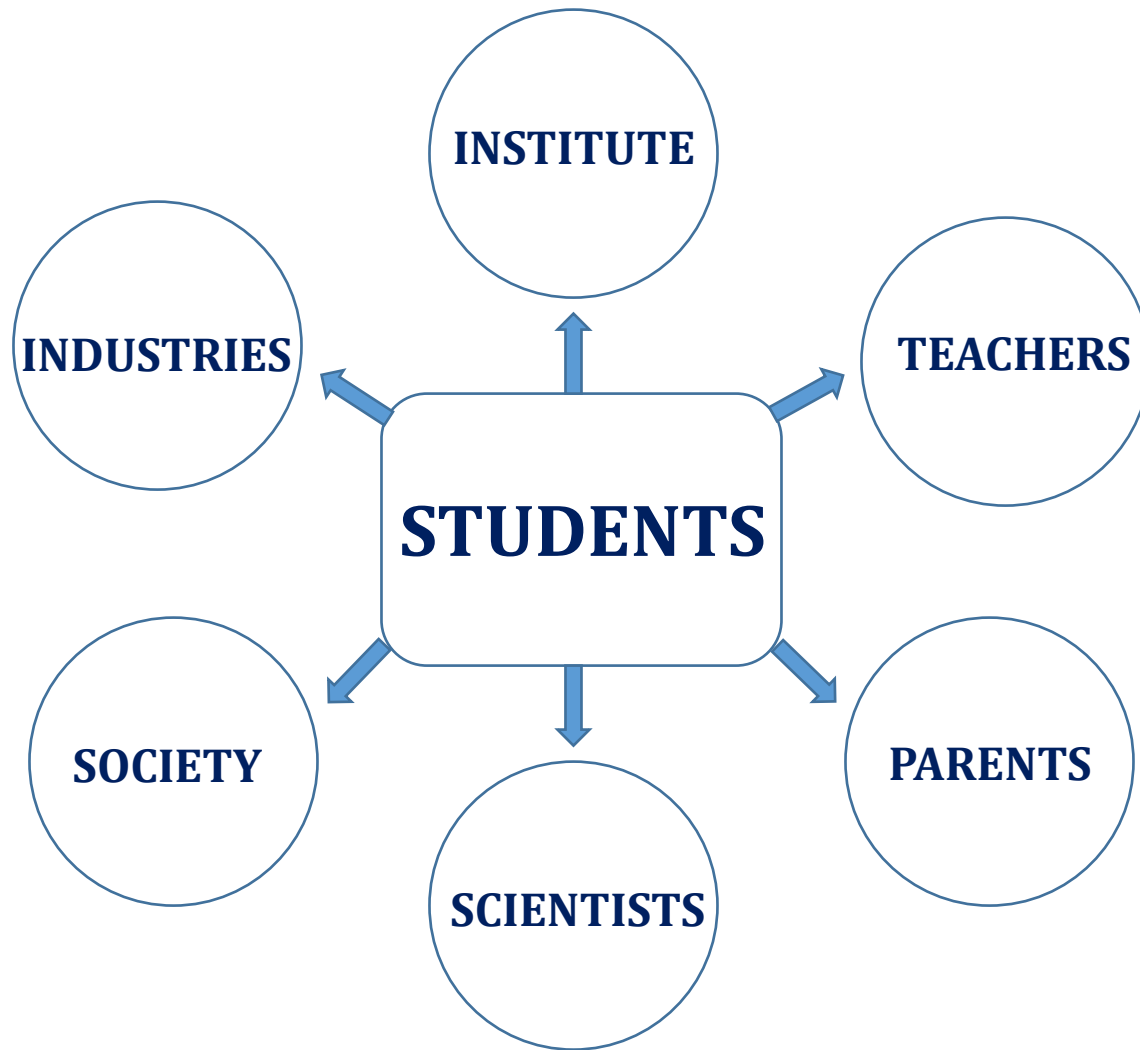
AREA in Sq. Ft - 1,899,411.41

AREA in Acres - 43.60

JSS PHARMAY INSTITUTIONS CAMPUS OF JSSAHER TOPOGRAPHICAL VIEW



SMART CAMPUS – BEGINNING & STAKE HOLDERS



For meaningful and successful sustainability programs in campus we need to

- ❖ Set clear strategies and goals
- ❖ Comprehensive approach
- ❖ Integrate students, faculty, staff and external partners
- ❖ Initiate pilot projects in several areas involving students
- ❖ Plan policies, financial resources, facilities management, curriculum, sustainability literacy, ecosystems, land use, energy resources, etc.

SMART CAMPUS POLICY

OBJECTIVE:

- ✓ Embed the use of smart technology into daily life of the campus; providing an opportunity for the development and application of innovation and technology to support a smart campus.
- ✓ Integrate an enhanced process and programme focused on materials, security, health, transport, energy and environmental management.
- ✓ Focus on maintaining “Eco friendly institution” through best practices.
- ✓ Provide world class facilities and enabling nationally and internationally renowned industrial/institutional partners leading to meaningful collaboration.

SMART CAMPUS POLICY

a). Students Centric:

- ✓ Students are fully safe and secure with homely atmosphere and are being monitored round the clock.
- ✓ Students have dedicated band width with high speed internet both on campus and hostel rooms.
- ✓ Smart Metering has given lot of data in terms of consumption pattern based on which several optimization measures have been implemented.

b). ICT enabled:

- ✓ Physical security of students in the campus was a big challenge.
- ✓ 400 CCTV cameras are in operations for surveillance at all times.
- ✓ Wi-Fi enabled.
- ✓ Students needed a SMART portal where in all services are taken care centrally from student entry in hostel and to their exit. Smart Portal was made operational for connectivity with students at all times.

SMART CAMPUS POLICY

c). Environment Friendly:

- ✓ JSS AHER has adopted an energy / resources conservation and recycling policy.
- ✓ Energy conservation measures will be achieved by using the most cost-effective, energy-efficient approach with consideration given for flexibility of use and future remodeling convenience. Recycling efforts are encouraged at the Institution/department level.
- ✓ All faculty, staff, students, design consultants, and construction contractors observe energy and resource conservation measures employed by the campus.
- ✓ The Transport Policy provides standard procedure for the acquisition, enhancement, use, control, maintenance, repair, checking fuel efficiency and disposal of the vehicles and for the management of related forms of transport engaged for official purpose.

STATUS OF SMART CAMPUS PROJECT

BUILDING & INFRASTRUCTURE

- Accessibility
- Safety and Security
- Energy efficient
- Rain Water Harvesting
- Walkable campus
- Bicycle
- Sustainable Transport
- Road network
- Signage

EDUCATION, LEARNING & DIGITIZATION

- Smart Classroom
- E-Resources
- Wi-Fi Connectivity
- ICT Enabled services
- Modular Laboratories
- Innovation Centre
- Virtual Class and Laboratories
- Outreach Programmes

SPORTS & RECREATION

- Playgrounds
- Sport facilities- Indoor and Outdoor
- Recreational space
- Open Gym
- Yoga facilities
- Amusement park
- Open air theatre
- Swimming pool

SAFETY & SECURITY

- CCTV surveillance
- Fire alarms
- Fire fighting
- Peripheral safety
- Visitor management system
- Biometric system
- Anti-ragging
- Women safety
- Student counselling

WASTE, WATER & AIR MANAGEMENT

- Sanitation and cleanliness
- STP
- Solid waste management
- Plastic waste management
- E-waste management
- Automatic sensor taps
- Air monitoring system

UTILITIES

- Solar Projects
- Smart lighting System
- Emergency power backup
- Smart micro grids
- Bio-gas plant
- Kiosks

GREEN ENVIRONMENT RESILIENCE

- Green Campus
- Landscaping
- Preserving open space
- Soil erosion control
- Ground water recharging

SERVICES & CONNECTIVITY

- Online services
- Amenities- Bank, Food court, Stationery, pharmacy
- Wi-Fi Services
- LAN

GOVERNANCE

- ERP
- Less paper Office
- Training and Development
- ART- Accountability, Responsibility, Transparency

FOOD & HEALTH

- Wellness Centre
- Health Centre
- Potable water facility
- Personal Hygiene
- Nutritional Values
- Dietary Components

VISIT TO SANKALP APARTMENTS – BIO WASTE MANAGEMENT



ACHIEVEMENT OF KEY ELEMENTS - VALIDATION

GREEN BUILDING AUDIT

INDIAN GREEN BUILDING COUNCIL (IGBC)

Consultancy by Godrej

IGBC Rating Program to suit Different Building Types

IGBC Green Homes

IGBC Green Factory Buildings

IGBC Existing Buildings

IGBC Green Townships

IGBC Green Landscapes

IGBC Green Interiors

IGBC Green School

IGBC Green Campus

IGBC Green New Buildings

IGBC Green Data Centre

IGBC Green Healthcare

ACHIEVEMENT OF KEY ELEMENTS

GREEN BUILDING AUDIT- INDIAN GREEN BUILDING COUNCIL (IGBC)

Consultancy by Godrej

No	Category	Points
1	Site Planning & Management	22
2	Sustainable Transportation	11
3	Water Conservation	18
4	Energy Efficiency	21
5	Material & Resources	03
6	Health & Well being	06
7	Green Education (GE)	03
8	Innovative Practices	06
	Total	90

Certification Level	New Campus	Existing Campus	Recognition
Certified	40 - 49	36 - 44	Best Practices
Silver	50 - 59	45 - 53	Outstanding Performance
Gold	60 - 74	54 - 66	National Excellence
Platinum	75 - 100	67 - 90	Global Leadership

5 categories prerequisite & 29 possible credits

SOCIAL RESPONSIBILITY - TOUCHING THE LIVES OF MILLIONS



JSS AHER'S Social Responsibility is an approach of ethical and intelligent management, which involves both its impact on its human, social and natural context, and its active role on the promotion of Sustainable Human Development of the country. Within this approach, "Sustainable Campus" is a strategy that strives to reduce the ecological footprint of the Institution via a rational use of resources and to educate the JSSAHER community on the ethics of sustainability.

TOUCHING THE LIVES

OF the students

1. As a most respected Higher Education Institute in the health sciences attracting students from a range of backgrounds nationally and internationally.
2. Responsive to students with a shared understanding of our mutual responsibilities.
3. Student support that covers all issues including support to low-income group students.
4. Transforming students as responsible citizens for a Sustainable Development.

OF the staff

1. Adopt best practices in its Human Resources Management policies and Practices.
2. Professional development.
3. Observe the fundamental tenets of human rights, safety and non-discrimination.
4. Involve employees in the decision-making processes, where appropriate.
5. Providing opportunities for staff to undertake projects with local communities.

SOCIAL RESPONSIBILITY - TOUCHING THE LIVES OF MILLIONS

TOUCHING THE LIVES

OF our environment

1. Ensure that the developments in JSS AHER are sustainable and do not have a negative impact on the environment.
2. Promote the concepts of the 3Rs of Reduction, Reuse and Recycling and eliminate, where possible, the use of non- degradable materials.
3. Aim for a continuous reduction of the carbon footprint of the Institution.
4. Provide equipment, training and other resources to ensure a healthy and safe environment for the students and staff.
5. Continuously work and evolve environmental improvements in the way we manage our transport, waste and energy.

TOUCHING THE LIVES

OF our City and our Community

1. To work with the City of Mysore and regional partners to raise the health profile of the City and neighboring districts ; and in partnership help secure the economic, health, social and cultural regeneration of the City and region.
2. Make significant and major contributions through our Faculty to the Social Responsibility agenda including:
 - the training of the future health professional workforce
 - The ongoing support for health professionals
 - Support JSS Hospital to provide access to quality healthcare at affordable costs
 - Nurture and contribute to research that impacts healthcare and health policies and makes significant contribution to national and global health.
4. Working with young people in local schools:
 - to discuss health and science and its relevance to their everyday lives
 - to inspire them to consider careers in science and health
 - to devise creative and fun activities to help engage them
5. By involving the public/patients in our work to improve the quality of our teaching and healthcare delivery.

SMART CAMPUS INITIATIVES IN LINE WITH SUSTAINABLE DEVELOPMENT GOALS (SDGs OF THE UN)

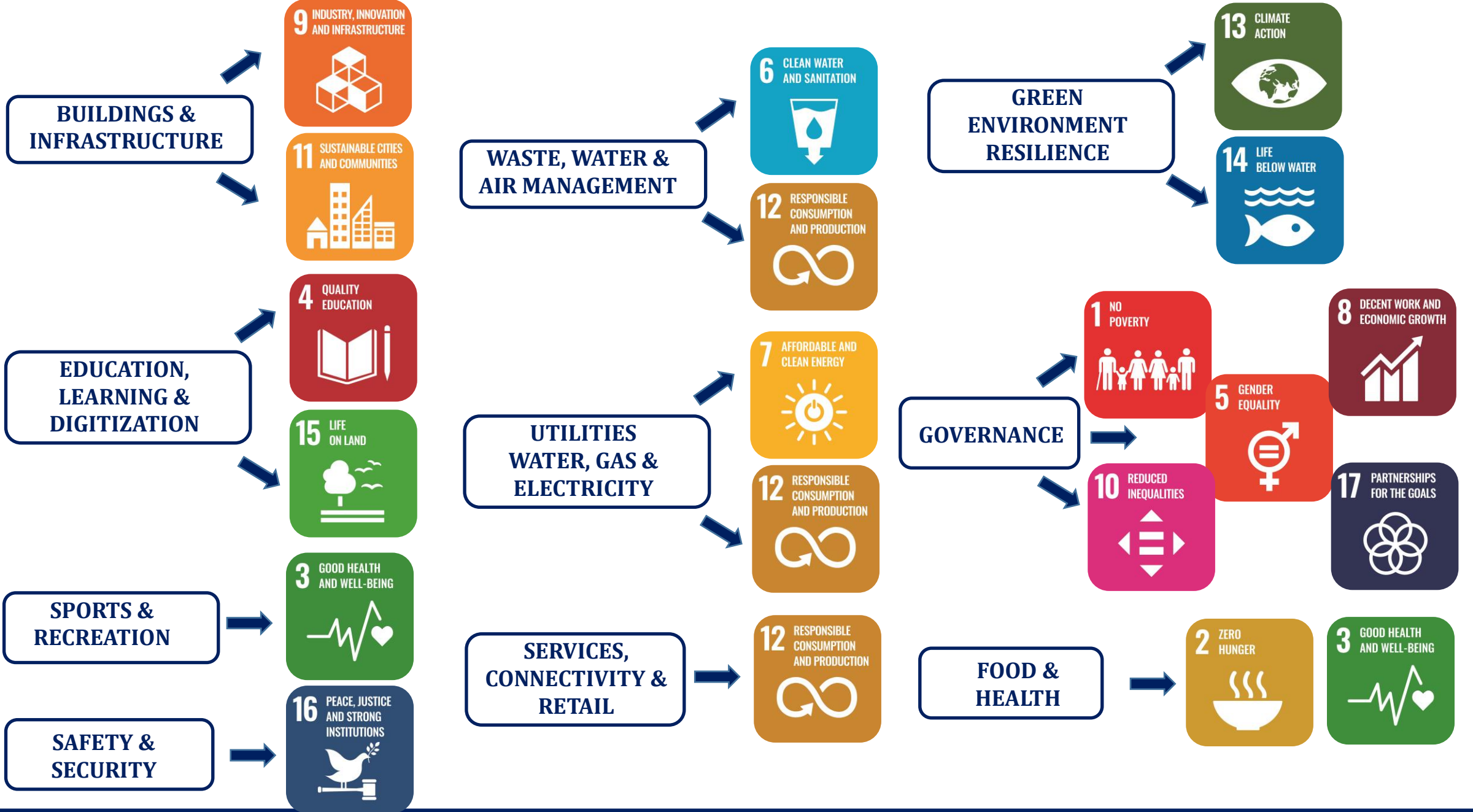
SUSTAINABLE DEVELOPMENT GOALS





INTEGRATION OF SDGs INTO KEY ELEMENTS OF SMART CAMPUS

No	KEY ELEMENTS	SDGs
1	BUILDINGS & INFRASTRUCTURE	SDG 9 (Industry, Innovation & Infrastructure), SDG 11 (Sustainable Cities & Communities)
2	EDUCATION, LEARNING & DIGITISATION	SDG 4 (Quality Education), SDG 15 (Life on Land)
3	SPORTS & RECREATION	SDG 3 (Good Health & Well- Being)
4	SAFETY & SECURITY	SDG 16 (Peace, Justice & Strong Institutions)
5	WASTE, WATER, AIR MANAGEMENT	SDG 6 (Clean Water & Sanitation), SDG 12 (Responsible Consumption & Production)
6	UTILITIES - WATER, GAS, ELECTRICITY	SDG 7 (Affordable & Clean Energy), SDG 12 (Responsible Consumption & Production)
7	SERVICES, CONNECTIVITY & RETAIL	SDG 12 (Responsible Consumption & Production)
8	GREEN ENVIRONMENT RESILIENCE	SDG 13 (Climate Action), SDG 14 (Life Below Water)
9	GOVERNANCE	SDG 1 (No Poverty), SDG 5 (Gender Equality), SDG 8 (Decent Work & Economic Growth), SDG 10 (Reduced Inequalities), SDG 17 (Partnerships for the Goals)
10	FOOD & HEALTH	SDG 2 (Zero Hunger), SDG 3 (Good Health & Well-Being)



STUDENTS SUSTAINABILITY PROJECT OF THE YEAR – INTERNATIONAL RECOGNITION – ASIA PACIFIC TRIPLE E AWARDS



CULTIVATION OF SPIRULINA - NUTRITIONAL DRINK EMPHASIZING ON WOMEN HEALTH - TOP 5 STARTUPS BY TiE - MYSURU CHAPTER



Sustainable Development Goal Ranks of JSSAHER				
SDG No.	Goal	2019	2020 (India)	2020 (Global)
	Overall Ranking	101 - 200	3	201 - 300
1	No Poverty	-	2	60
2	Zero Hunger	-	2	101 - 200
3	Good Health and Well Being	46	1	20
4	Quality Education	201 - 300	13	401 - 600
5	Gender Equality	201+	2	101 - 200
6	Clean Water & Sanitation	-	12	101 - 200
7	Affordable & Clean Energy	-	7	101 - 200
8	Decent Work and Economic Growth	-	6	400+
9	Industry, Innovation and Infrastructure	201 - 300	12	400+
10	Reduced Inequalities	101 - 200	7	301 - 400
11	Sustainable Cities and Communities	101 - 200	5	301 - 400
12	Responsible Consumption & Production	16	6	201 - 300
13	Climate Action	-	2	101 - 200
14	Life Below Water	-	-	-
15	Life on Land	-	3	73
16	Peace, Justice and Strong Institutions	91	8	400+
17	Partnership for the Goals	201 - 300	5	201 - 300

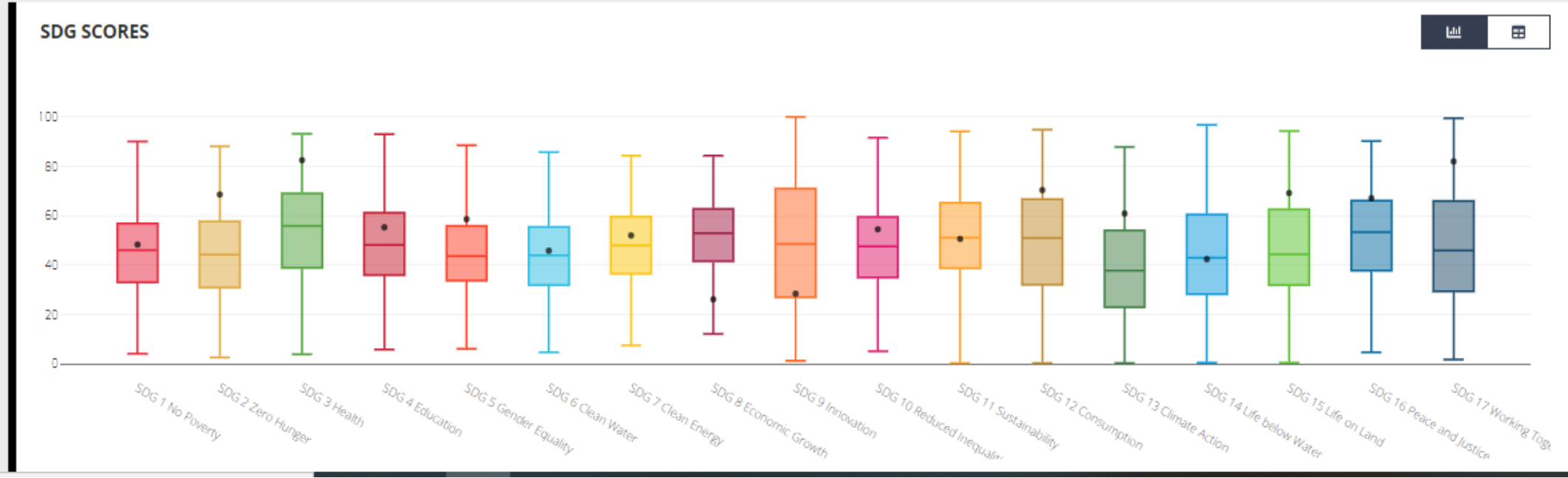
THE Impact Rankings 2021

- Home
- Data+
- Explore
- New Data
- Reputation
- WUR Release
- NEW** SDG Impact
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THE Impact Rankings 2021

Data & methodology [Download](#)

OVERALL SCORE 80.3 out of 100	OVERALL RANK 101-200 out of 1117 institutions	SDG PARTICIPATED 17 out of 17 Sustainable Development Goals
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THE Impact Rankings 2021

JSS Academy of Higher Education and Research

12 ∞

RESPONSIBLE CONSUMPTION AND PRODUCTION

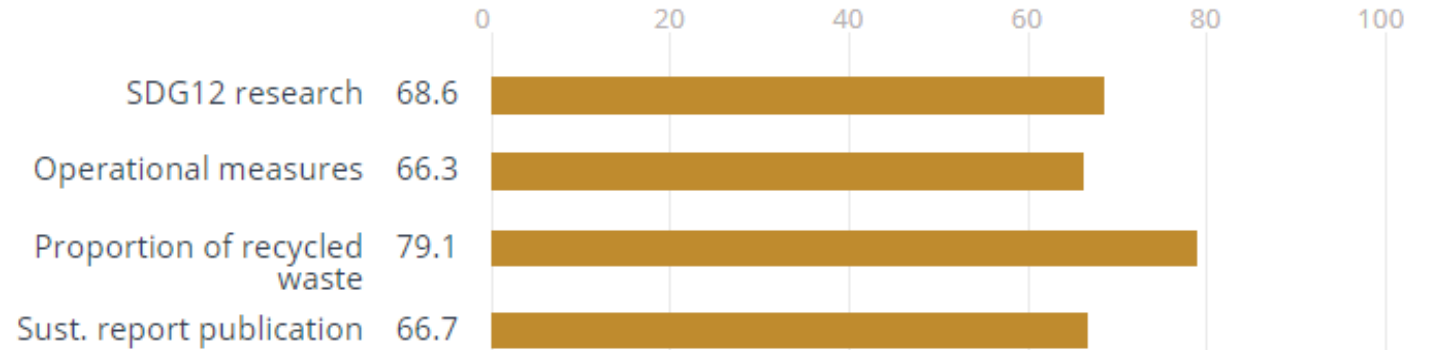
QUALIFYING SDG - 26% OF OVERALL

SCORE

70.4

RANK

97 out of 503 institutions



13 🌍

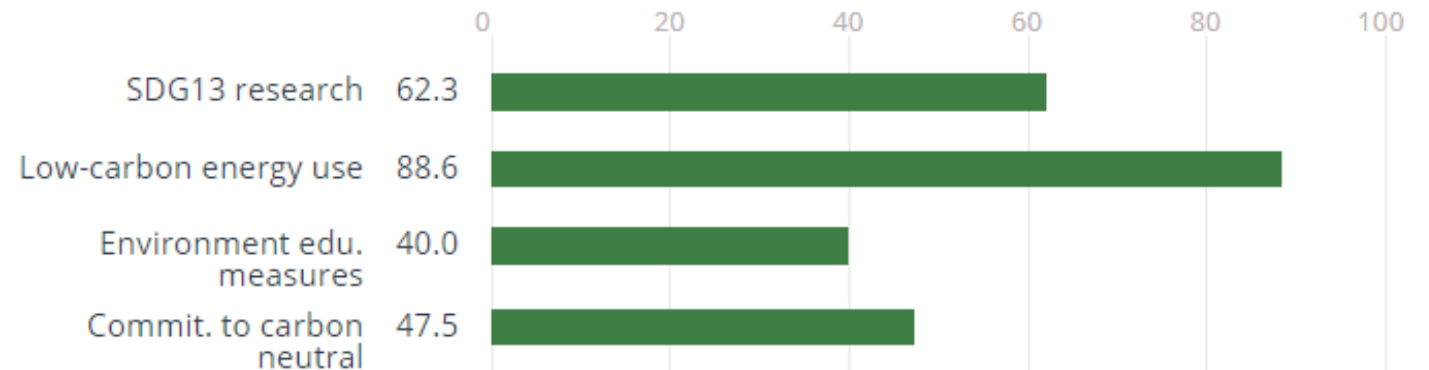
CLIMATE ACTION

SCORE

60.9

RANK

=81 out of 566 institutions



THE Impact Rankings 2021

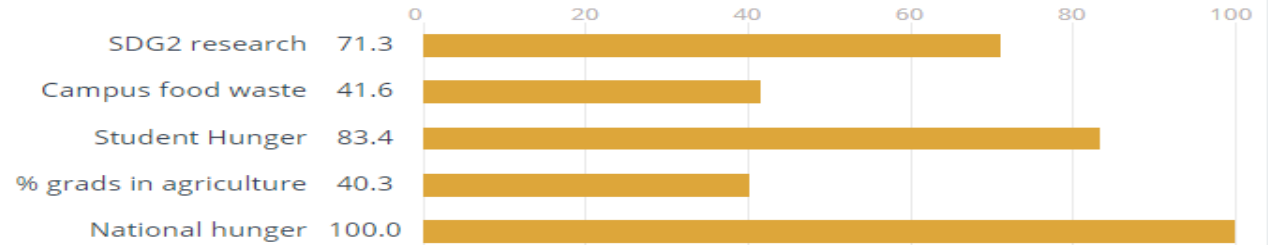
JSS Academy of Higher Education and Research

2 

ZERO HUNGER

QUALIFYING SDG - 26% OF OVERALL

SCORE **68.6** RANK **=49** out of 442 institutions

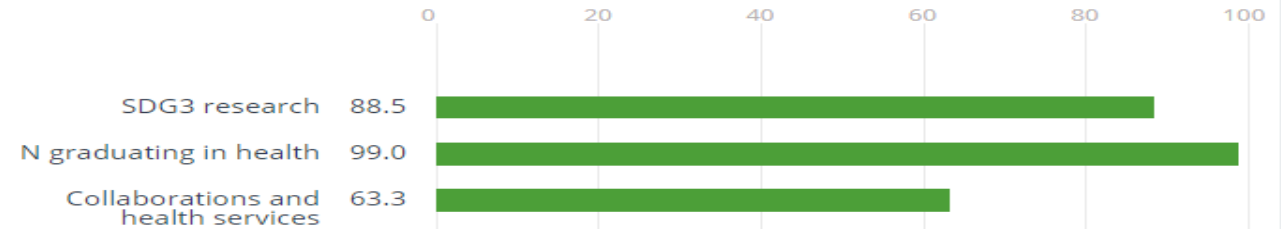


3 

GOOD HEALTH AND WELLBEING

QUALIFYING SDG - 26% OF OVERALL

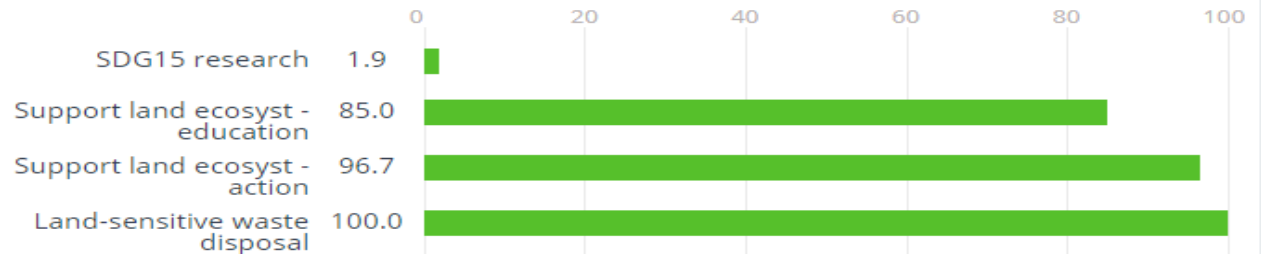
SCORE **82.5** RANK **52** out of 871 institutions



15 

LIFE ON LAND

SCORE **69.2** RANK **=70** out of 402 institutions



Sustainable Life @



“Leaving No One Behind”

Sustainable Development Goals

Smart Campus



INFRASTRUCTURE & MAINTENANCE POLICY

**JSS ACADEMY OF HIGHER EDUCATION & RESEARCH,
MYSURU**

PREFACE

JSS Academy of Higher Education & Research is focused on medical and health-related studies, and comprises JSS Medical College, JSS Dental College and JSS College of Pharmacy at the main campus in Mysore as well as in Ootacamund, Tamil Nadu. With a view to extend the horizons in the field of Health Sciences, the Department of Water and Health, Department of Health System Management were also started.

Over the years JSS Academy of Higher Education & Research has amassed several accolades. The institute is accredited with A+ Grade (CGPA of 3.47 out of 4) by National Assessment and Accreditation Council (NAAC) during 2018 re-accreditation. The Deemed to be University is continuously sustaining its position since three years in top 50 universities & top 10 pharmacy colleges in NIRF ranking. For the first time JSS AHER has been recognized globally by the Times Higher Education within top 500 universities and the institute has been listed in the band of 200-300 Universities across the world.

Continuing its efforts to impart quality education and infrastructure, JSS AHER has taken an initiative towards building up a Smart Campus by enhancing its teaching – learning resources, infrastructure, upgradation of technology, research & innovation, waste management and green environment resilience. The institute has planned to incorporate smart thinking which leads to sustainable living and working conditions especially among the students who are not only the main stake holders but also the future ambassadors of smart and sustainable life styles.

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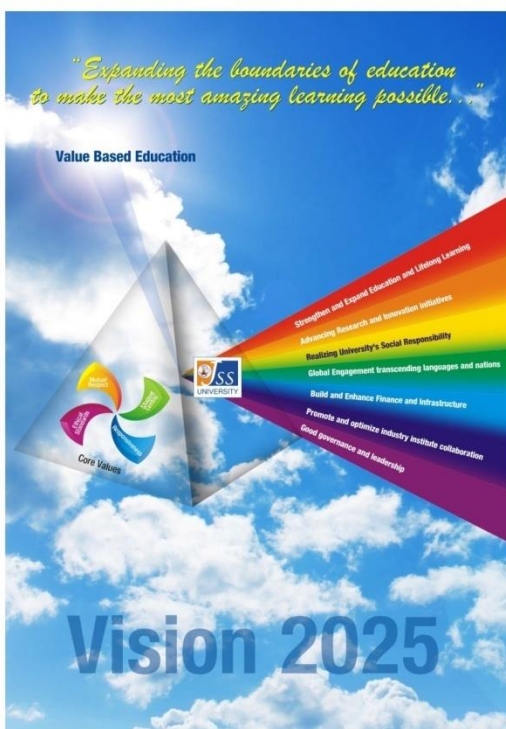
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Executive Summary

JSS group of institutions has a number of educational units at different regions and the JSS Academy of Higher Education & Research or shortly JSS AHER is one of the important milestones in the societal contribution of the parent organization, JSS Mahavidyapeetha and it has grown tremendously in just over a decade which is because of the continuous striving to fulfill the Vision & Mission of the Deemed to be University. The institute has set up a Vision Plan for the next 15 years to reach a status of excellence.

VISION PLAN

Vision 2032 - Transformation from Good to Excellent



“ Vision

To provide education that helps transformation of individuals and society. ”

“ Mission

The mission of JSSU is to expand the boundaries of education and to make the most amazing learning possible by:

- Providing superior undergraduate, graduate and professional education to its students.
- Developing and advancing the talents of students to create applicable knowledge.
- Nurturing translational and transformational research that benefit the society.
- Inspiring to excel in health sciences delivery and care. ”

5 Year
Action Agenda

10 Year
transformative
agenda

15 year
Excellence
Agenda

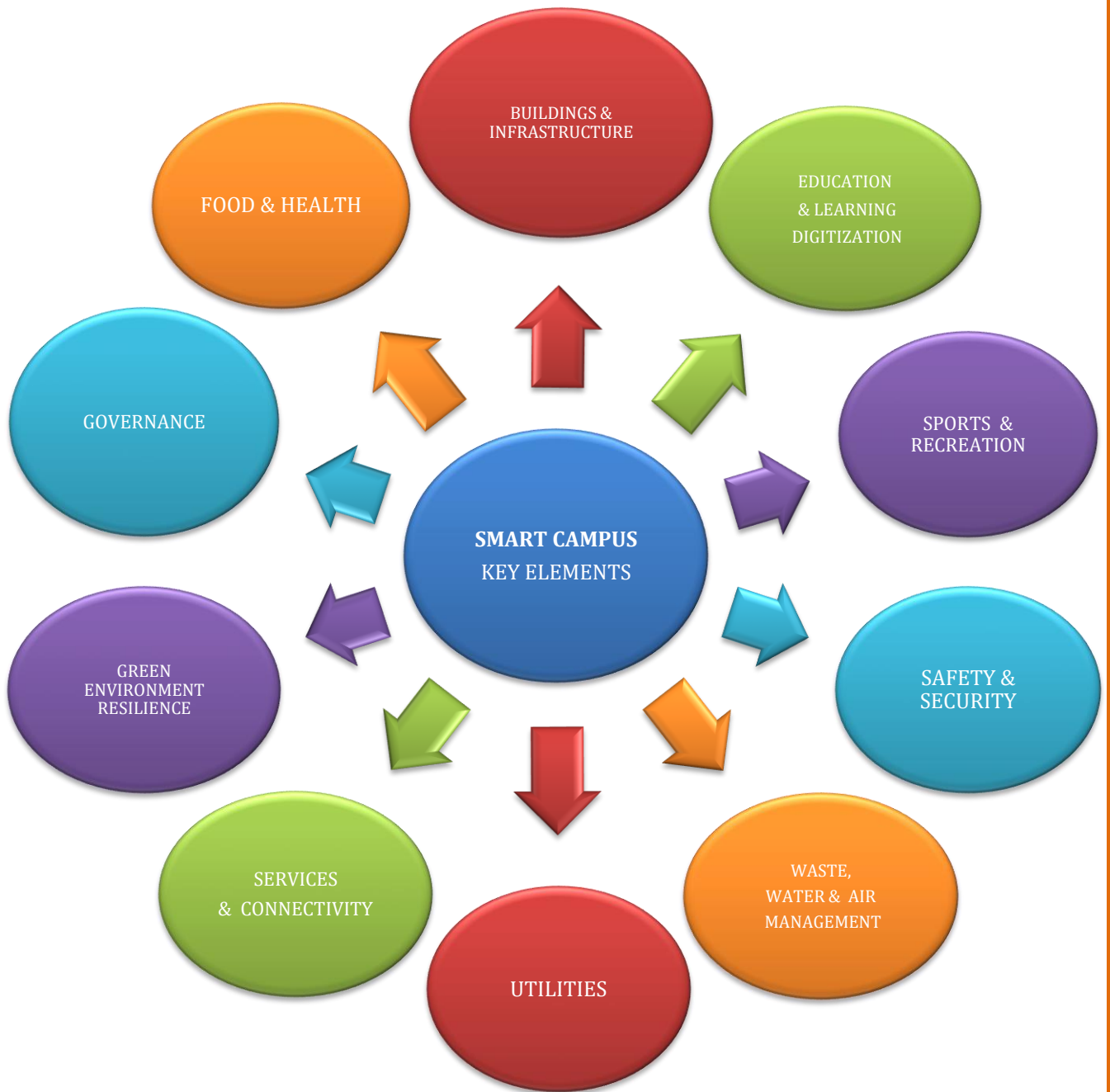
Focus Areas of Education and Research

- ❖ Health Sciences
- ❖ Science and Technology
- ❖ Energy, Environment and Water resources
- ❖ Skill Development and Entrepreneurship
- ❖ Policy, Leadership and Good Governance

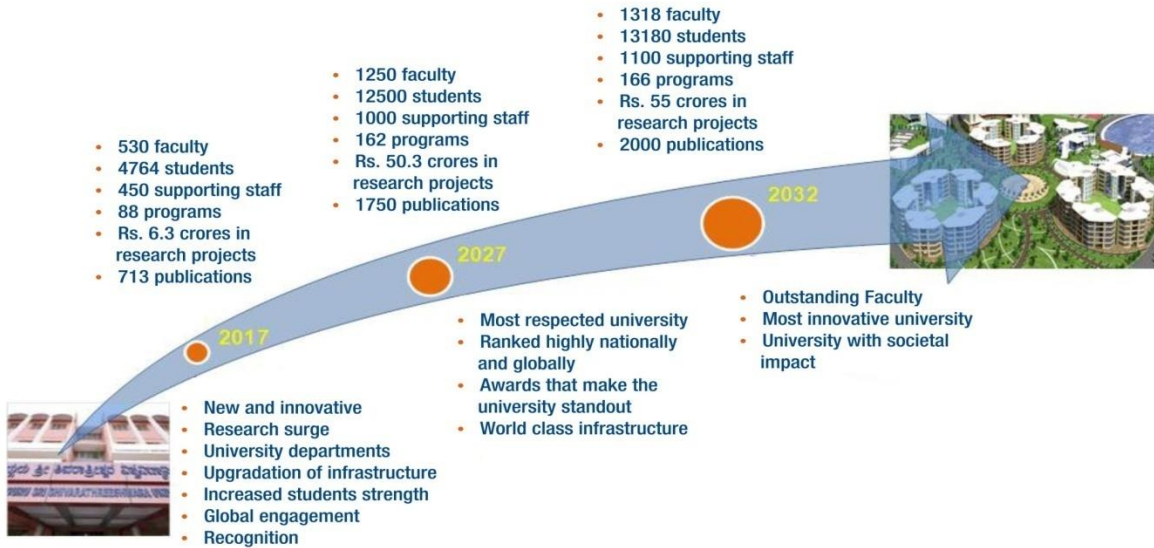
The institute is situated in a 43 acre land and comprises of Medical College, Dental College and University Departments (Faculty of Life Sciences and Health Systems Management Studies). JSS AHER has planned to adapt for a smart campus as per the need of the hour. The institute is focusing on 10 key elements that comprise smart campus viz. 1. Buildings & Infrastructure, 2. Education, Learning & Digitization, 3. Sports & Recreation, 4. Safety & Security, 5. Waste, Water, Air management, 6. Utilities – Water, Gas, Electricity, 7. Services & Connectivity, 8. Green environment resilience, 9. Governance & 10. Food & Health.

As an initial step, the institute has surveyed the available facilities which would enable either to enhance or add smart features. Further, discussions and feedback from stake holders are in progress which would add significant values towards the goal. Students are the central part of the smart campus as they are the ambassadors of a sustainable future.

To begin with, the institute has planned to focus on Swachhta Ranking, an initiative by the MHRD, Government of India which earmarks the potential of an institute to be smart.



15 Year Vision Plan for becoming an Institution of Eminence



JSS AHER has set a long term goal of establishing its new campus at Varuna with an estimated budget of Rs. 2000 Crores.



An over view of the architectural plan of the proposed Varuna campus
With the vision already set, the implementation of smart and best practices will be an important aspect to be followed for a smart and sustainable future of the employees and

the student communities at large. Executing the practices of energy conservation, reducing carbon footprints by sustainable food habits among the faculty and students, proper drinking water facilities, water re-usage, managing food, solid and other wastes, healthy living standards through habits of well being, pollution control within the campus achieved through pedestrian friendly atmosphere and reduction of vehicle commuting, increasing the green carpet and preserving open spaces and other institutional best practices are the key players of achieving a smart campus.

1. INTRODUCTION:

A Smart Campus actively learns from and adapts to the needs of its people and place, unlocking the potential of e-technology and enabling world-changing learning and research methodologies. Also to create an environment friendly atmosphere enabled with technology is the main goal of a smart campus. It is a modern application in the standard of the internet of things. The idea of building a “smart campus” implies that the institution will adopt advanced ICTs to automatically monitor and control all the facilities on campus. The students and staff members will benefit from location-aware services for using campus equipments and collaboration services. This will add values for students and increases the attractiveness of the campus. New emerging technologies have changed human lifestyles dramatically. The smart campus implements an IoT-based system to a selected part of campus like the Campus Environment, Campus Security, Campus Parking, Campus Building, Campus offices, and classroom to create smart environment, smart security, smart building, smart parking, smart offices, and smart classrooms.

Apart from focusing on technology, smart campuses are inevitable to restore environment and resources and also help the student communities for a smart and sustainable future. There are more than 750 universities, 40,000 colleges and institutes, and 1.5 million schools in India where around 200 to 300 million students are engaged in learning. Apart from being a significant consumer of energy, water and other utility and material resources, the educational campuses provide captive young thinkers action-based education on sustainable development. They are the spaces bubbling with potential opportunities to create skilled and 'job-ready' professional force.

Government of India has initiated a project on smart campuses throughout the country. The project is flagship activity of Technology, Education, Research and Rehabilitation for the Environment (TERRE) Policy Centre, a think-tank and action platform for sustainable development. It is called Smart Campus Cloud Network (SCCN).

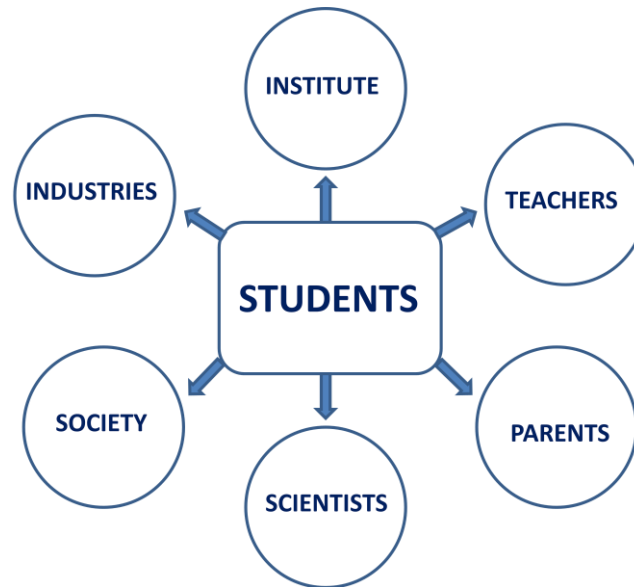
A smart campus is achieved by integrating sustainability to every component of an institute including building structures, renewable resources, digitalization through internet of things (IoT), bringing together the institute, stake holders, faculty and external members to understand the necessity of a sustainable and environment friendly campus.

JSS AHER has established its State of Art Campus using cutting edge technology. In order to achieve the smart campus status the institute and the constituent colleges have initiated the process of implementing technologies like

1. Smart Physical Security and Surveillance
2. Smart Wi-Fi Enabled Campus
3. Smart Metering
4. Smart Recycling Process
5. Smart Transportation System
6. Smart Energy Conservation and Utilization practice
7. Smart Hostel Management
8. Smart Canteen/food court management

For meaningful and successful sustainability programs in campus we need to

- Set clear strategies and goals
- Have a comprehensive approach
- Integrate students, faculty, staff and external partners
- Initiate pilot projects in several areas involving students
- Plan policies, financial resources, facilities management, curriculum, sustainability literacy, ecosystems, land use, energy resources, etc.



Stake holders involved in the building of a smart campus with students occupying the central position

2. SMART CAMPUS POLICY

I. OBJECTIVE:

- To embed smart technology into daily life of the campus, providing an opportunity for the development and application of innovation and technology to support a smart campus.
- To integrate an enhanced process and programme focused on energy, materials, security, health, transport and environment management.
- To focus on maintaining “Eco friendly institution” through best practice.
- To educate students on the importance of sustainability for a smart future
- To provide world class facilities to enable nationally and internationally renowned industrial/institutional partners to co-locate on the campus.

II. SMART CAMPUS INITIATIVES:

a) Over all activities:

- The Institute implemented CCTV cameras for the security of students day and night from the year 2010.
- The surveillance has built in analytic and intelligence for immediate remedial measures.
- Students are always connected to smart Wi-Fi.
- Healthy environment to support the mental, physical and social well being of the students and staff of the Institute.
- Daily power and water consumption data per student and room basis are captured and analyzed for reducing consumption cost.

b) Students Centric Smart Campus:

- Students are ensured a safe and secure homely atmosphere and are being monitored round the clock.
- Students have high speed internet both on campus and hostel rooms.
- Smart portal has a great impact on both students and stakeholders who are directly involved in daily hostel operations.
- Students are involved in the making of smart campus through several mini and major projects.

c) ICT Based Smart Campus:

- Physical security of students in the campus was a big challenge.
- 400 CCTV cameras are in operations for surveillance at all times.
- Internet plays a vital role in enabling students to pursue their academic goals. Internet with adequate band width was provided to make the campus Wi-Fi enabled.

- Optimization and improvement can only be brought about by identifying consumption patterns. The goal was to reduce the consumption of water and electricity to the lowest levels possible. Smart Metering was implemented for taking optimal decisions.
- A large number of students join every year. University needed a SMART portal where in all services are taken care centrally from student entry in hostel and to their exit. Smart Portal was made operational for connectivity with students at all times.

d) Environment Friendly Smart Campus:

- In order to minimize energy usage, improve the efficiency of all energy/ resources (natural resources, water, electricity) consuming systems and equipment, and improve the environment in all facilities, JSS AHER has adopted an energy / resources conservation and recycling policy.
- Conservation of energy and natural resources and recycling process is an integral part of JSS AHER facilities' design and usage.
- The University employs a variety of energy conservation, recycling, and other techniques to lessen the consumption of resources and achieve the lowest feasible life cycle costs.
- Energy conservation measures will be achieved by using the most cost-effective, energy-efficient approach with consideration given for flexibility of use and future remodeling convenience. Recycling efforts are encouraged at the Institution/department level.
- All faculty, staff, students, design consultants, and construction contractors observe energy and resource conservation measures employed by the campus.
- The Campus Facilities Maintenance & Management Authority- Deputy Registrar shall be the principal coordinator of all design disciplines, which includes responsibility for the implementation of this policy.
- Constituent Colleges & Departments are responsible for internal energy conservation and recycling efforts.
- The Transport Policy provides the Institute with a standard procedure for the acquisition, enhancement, use, control, maintenance, repair, checking fuel efficiency and disposal of the Institute's vehicles and for the management of related forms of transport engaged for Institute activities.

III. LONG TERM GOAL:

The long-term strategy of the University focuses on the creation of a world-changing, connected, healthy and vibrant university campus. To achieve the goal, the Institute will concentrate on:

a) Digital Environment

- Open, flexible, integrated, interoperable, secure and scalable ICT architecture;
- Sense, capture, monitor and evaluate data to support and study the performance of the campus in real time.

b) Integrated Urban Energy Systems

- Low carbon, low impact energy in a complex urban environment, focusing on generation, storage, distribution and management.

c) Data-driven Infrastructure Innovation

- Resilient infrastructure systems
- Innovation in infrastructure design and delivery
- Building Information Modeling (BIM) for design and life-cycle performance.

d) Health & Wellbeing

- Evaluate, understand and improve the physical environment
- Develop new practices for workplace wellbeing
- Develop the technology, including wearable technology, to measure and influence health related behavior.

e) Student Experience and Pedagogy

- Data-driven services and spaces for an improved student experience
- Technology-enabled learning & teaching (including active learning, interactive teaching, flexible study).

IV. AUTHORITY:

The Vice-Chancellor & Registrar of JSS AHER hold delegated authority and are responsible for all aspects of the Institute's "SMART CAMPUS POLICY".

The Smart Campus Policy of JSS AHER follows:

- The Swachh Bharat Mission (Urban) guidelines, Government of India.
- National conservation strategy and policy statement on environment and development, Government of India.
- National Cyber Security Policy, Ministry of Communication and Information Technology, Government of India.

3. DEMOGRAPHICAL VIEW OF MEDICAL INSTITUTIONS



4. KEY ELEMENTS AND SUB ELEMENTS OF A SMART CAMPUS

1. Smart Buildings & Infrastructure

Accessibility
Safety and Security
Energy efficient
Rain Water Harvesting (RWH)
Walkable campus
Bicycle
Sustainable Transport
Road network
Signage

2. Smart Education, Learning & Digitization

Smart Classroom
E-Resources
Wi-Fi Connectivity
ICT Enabled services
Modular Laboratories
Innovation Centre
Virtual Class and Laboratories
Outreach Programmes

3. Smart Sports & Recreation

Playgrounds
Sport facilities-Indoor and Outdoor
Recreational space
Open Gym
Yoga facilities
Amusement park
Open air theatre
Swimming pool

4. Smart Safety & Security

CCTV surveillance
Fire alarms
Fire fighting
Peripheral safety
Visitor management system
Biometric system
Anti-ragging
Women safety
Student counselling system

5. Smart Waste, Water & Air Management

Sanitation and cleanliness
STP
Solid waste management
Plastic waste management
E-waste management
Automatic sensor taps
Air monitoring system

6. Smart Utilities

Solar Projects
Smart lighting System
Emergency power backup
Smart micro grids
Bio-gas plant
Kiosks

7. Smart Services & Connectivity

Online services
Amenities- Bank, Food court, Stationery, pharmacy
Wi-Fi Services
LAN

8. Smart Green Environment Resilience

Green Campus
Landscaping
Preserving open space
Soil erosion control
Ground water recharging

9. Smart Governance

ERP
Less paper Office
Training and Development
ART- Accountability, Responsibility, Transparency

10. Smart Food & Health

Wellness Centre
Health Centre
Potable water facility
Personal Hygiene

ACTION TAKEN REPORT

4.1. **Smart Buildings & Infrastructure**

Buildings & Infrastructure are the main criteria of functionality. The JSS Medical Institutions comprise JSS Medical College, JSS Dental College, Faculty of Life Sciences (Heritage Building), Hostels and Playgrounds.

To realize the vision of providing education for transformation of individual and society, each faculty has been provided to have their own separate self contained buildings to meet the academic, administrative, research, training and extension activities associated with teaching learning process. The infrastructure is provided to meet the modern requirements by retaining the conventional methods wherever required to accommodate the following requirement:

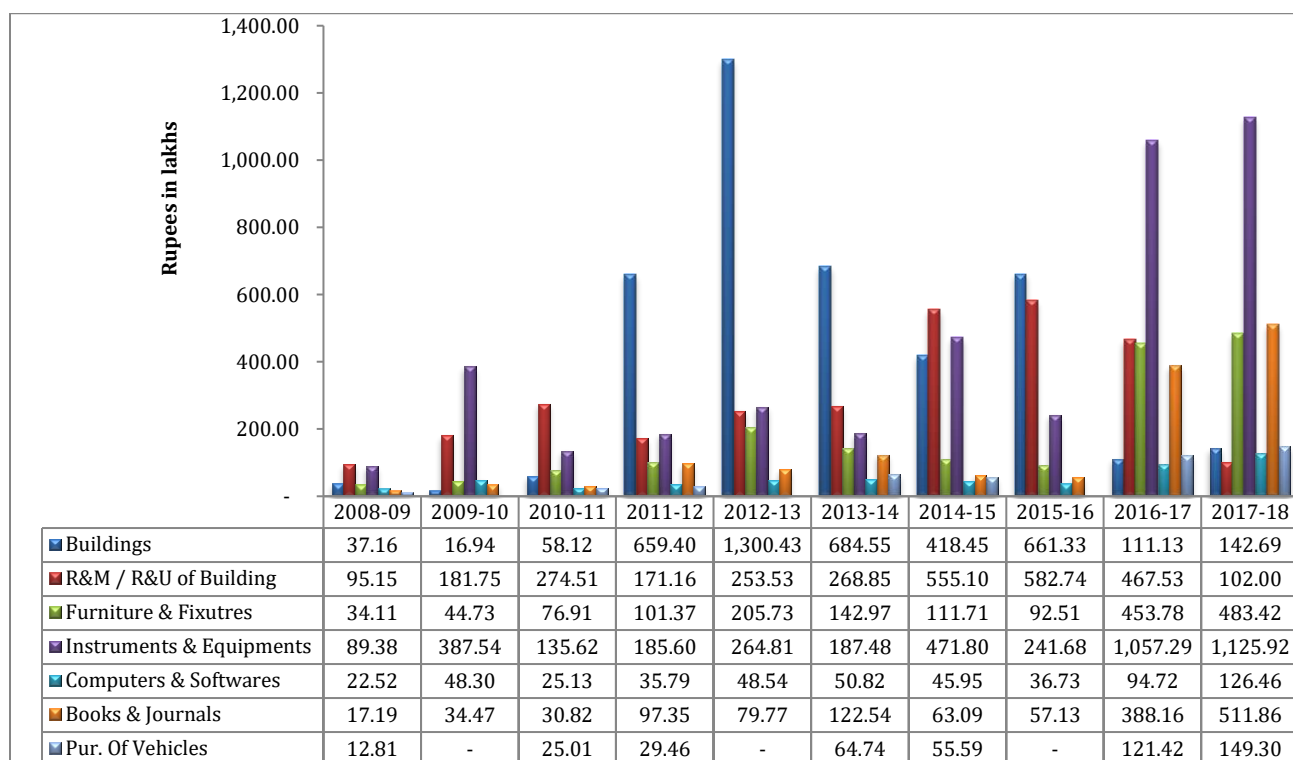
- ✓ To have national and international strategic tie – ups and to collaborate with reputed universities, industries and research organizations.
- ✓ To build global network through alumni and to have multidimensional partnerships with faculty and institutions around the world to foster flow of ideas.
- ✓ To establish centers of excellence.
- ✓ To ensure the quality education system nationally & internationally and necessary certification recognition are obtained.
- ✓ To attract the best researchers and research students by providing comprehensive support and motivation.
- ✓ To drive inter – disciplinary approach as desired by the global world.
- ✓ To work in partnership with policy makers and practitioners worldwide, to bring improvement in real time to people’s lives.

JSS AHER is a multi campus institution located with its campuses at Mysuru and Ooty. The campuses have a total extent of land area of 57.24 acres and house the four constituent colleges and two university departments. The campus is endowed with the state of the art buildings comprising of the physical infrastructural facilities that support and facilitate teaching – learning process.

Following are the details of land of JSSAHE&R Campuses and the expenditure incurred towards providing infrastructure to create an excellent ambiance and atmosphere for work

Sl. No.	JSSU Campuses	Total Area in acres	Total Built up Area	Plinth Area / in %	Infrastructure Provided
1	JSSMI Campus, Mysuru	43.60	79861.81 Sqm	15.06%	<ul style="list-style-type: none"> • Academic Infrastructure • Library & Information Services & ICT • Amenities • Support Services
2	JSSCP Campus, Mysuru	7.19	17,966.82 Sqm	27.90%	
3	JSSCP Campus, Ooty	6.40	37932.76 Sqm	22.96%	
4	NRI Studio Apartments - Off campus (B+G+3)	0.275	1747.60 Sqm	33.67%	
5	Staff Quarters - Off campus (G+2)	0.275	1982.00 Sqm	56.67%	

Expenditure Incurred towards providing Infrastructure



Academic infrastructure

Auditorium

Auditoriums and multipurpose halls are fully equipped with AC, lighting and AV solutions for conducting various functions, meetings and cultural activities as below:

Sl. No.	Name of the Institutions	Seating Capacity
1	JSS Medical College, Mysuru JSS Hospital, Mysuru	600 500
2	JSS Dental College & Hospital, Mysuru	300
3	JSS College of Pharmacy, Mysuru	500
4	JSS College of Pharmacy, Ooty	500



Gallery / Seminar halls

Sl. No.	Name of the Institution	Details	Seating Capacity	Number
1	JSS Medical College, Mysuru	Lecture Hall (Gallery Type)	275 x 1 250 x 4 200 x 2	07
2	JSS Hospital	Lecture Hall	250 x 1 150 x 1	02
		Seminar Room	60 x 100	14
3	JSS Dental College & Hospital, Mysuru	Lecture Hall	100 x 4 60 x 2	06
		Seminar Hall	50 x 9	09
4	Dept., of Water & Health	Lecture Hall	40 x 3 20 x 4 15 x 6	13
		Seminar Room	100 x 1	01
5	Dept., of HSMS	Lecture Hall	40 x 2	02
		Seminar Room	40 x 1	01



PG guest hostel

JSS AHER has newly constructed the PG Guest Hostel at the North East Corner of JSSMI Campus comprising B+G+2 floors.

Guest House



Sub Elements of Smart Buildings & Infrastructure

Accessibility

JSS Medical College campus is situated on the Mysore – Bangalore Highway and it is well accessed by all the stakeholders. College has bus facilities for students and it is also well connected through local bus routes.

Disabled access facilities provided for physically challenged

For the physically challenged personal the following facilities are made available in the college campus.

- ✓ Wheel Chairs
- ✓ Stretchers
- ✓ Ramps provided in all the floors of the college and hostel
- ✓ Suitable toilets provided in college and hostels
- ✓ Lift facilities available



Accessibility for disabled or students who require additional support during examinations

Wash room – physically challenged access

All the institutions of JSSAHE&R have provided the Physically Challenged Friendly Washrooms for the convenience of them.



Safety and Security

All the buildings are safe and do not pose any threat to students, employees and other stakeholders due to wide spaced rooms and corridors. Fire alarms and fire extinguishers are in place. Laboratories are equipped with first aid accessories.

Energy efficient

Most of the buildings are equipped with enough natural lighting, avoiding the use of artificial lighting during majority of the time. Wherever lighting is required, all the energy consuming bulbs have been converted to LED lamps which conserve energy. There is enough ventilation allowing natural air passing through the buildings, thereby reducing the use of air conditioners.

Name of the Institution	Power generation (SRTP)	Date of Solar plant charging (of panels) / generation	Details of Feeders used for Solar power generation		Impact of the initiative
			No. of feeders	Capacity	
JSSDCH	172 kw	19 th May 2019	04	50kw*2no's 36kw*2no's	Total Power dependency on KEB is reduced by 50% in JSS Medical Institution campus of JSS AHER @ Mysuru
JSSMC	200 kw	3 rd June 2019	04	50kw*4no's	
JSSCPM	100 kw	19 th July 2019	02	50kw*2no's	Total Power dependency on KEB is reduced by 70% in JSS College of Pharmacy campus of JSS AHER @ Mysuru

Rain Water Harvesting (RWH)

There are a couple of pits available within the campus which is connected by water pavements which collect rain water.

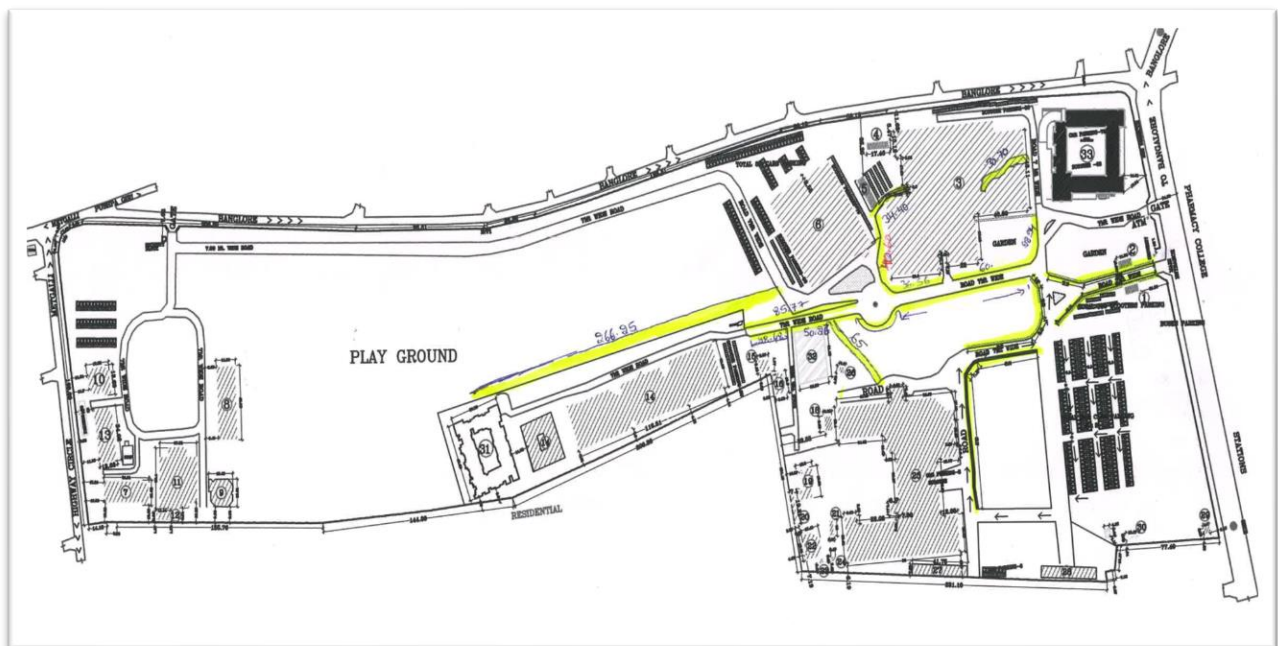


Walkable campus

The Medical College campus is well accessed by walking between the different constituent colleges. Almost 1 km of walking pavements have been arranged making the accessibility better.



Walking pavements within the campus



Bicycle

JSS AHER has introduced bicycles for the convenience of students and faculty at different points which has considerably reduced the usage of motor vehicles. This initiative goes in line with creating a green campus, reducing the carbon output.



Bicycle stand constructed within the campus

Sustainable Transport

JSS AHER has provided a well connected transportation to large number of students. Bus facility is provided for easy transit between the different units of the Institute for students, teachers and other employees. The college buses are regularly checked for their efficiencies, such that no extra fuel is utilized. The institute provides regularly maintained vehicles for commutation and the concept of car pooling and use of bicycles within the campus have been initiated.

Type of Vehicle	Total
Buses	11
Mobile Van / Ambulance	02
Bolero / Jeeps	08
Cars	03
Two Wheeler	01



Road network & Signage

The entire campus is well connected with roads and there are proper signage displayed wherever necessary.

4.2. SMART EDUCATION, LEARNING & DIGITIZATION

Digitization of teaching and study materials is under process. Accessibility to study materials by students is rendered through Wi-Fi connectivity in the entire campus. Most of the rooms are IT enabled in order to enhance learning through powerpoints and videos.

Spacious and well furnished libraries cater the needs of students in learning.

Existing Facilities

- Smart class room – 2 no's (MC & DCH)
- Simulation lab (Pharmacology and Physiology)
- Digital Library – 4 no's (MC - 40 no's. DCH – 15 no's. HSMS – 5 no's. FLS – 28 no's)
- Outreach programme facility (ISRO open Learning)
- IT enabled classroom (with projectors)
- Upto 1 GBPS uninterrupted internet services through NKN connectivity for a period of 10 years is availed (*presently, 300 mbps*)
- All the buildings are connected with OFC cable.
- Wifi connectivity is enabled (*within the building*)
- MS Windows license version computers
- JSSU online services (*for all official communication*)

Smart Classroom

Smart classrooms are provided to extract the potential of best online resources in teaching and learning process and to go extra mile to grasp information other than the curricula, online resources can improve the curiosity and creativity among the students.

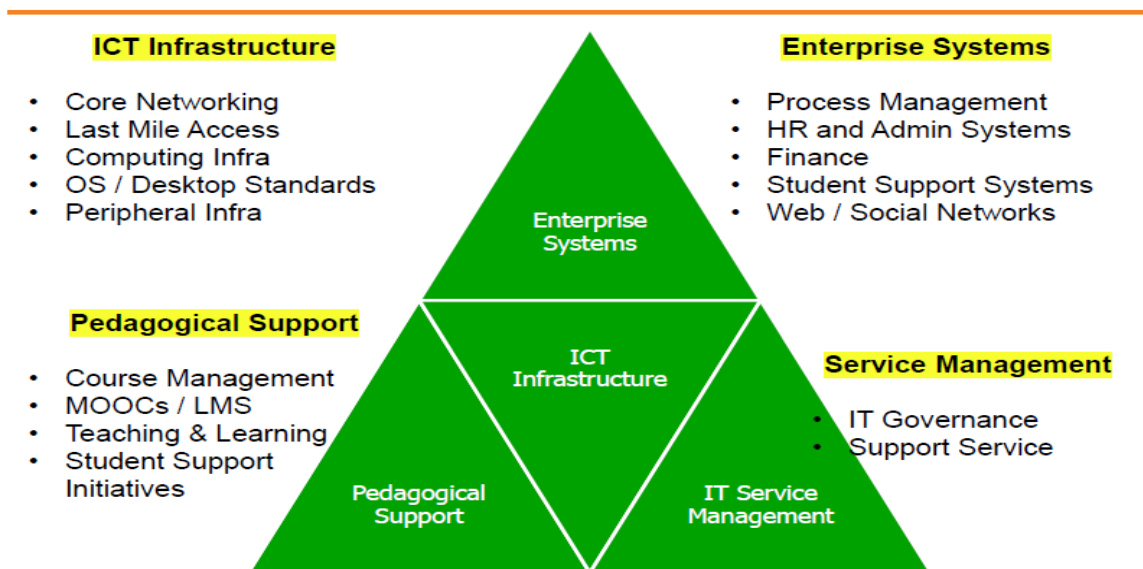


JSS AHER has provided smart class rooms with facilities up to date for benefit of the students.

ICT Enabled services, Wi-Fi Connectivity & E-Resources

The entire campus is Wi-Fi enabled and students can access learning materials wherever they are. All the study materials have been available through the JSS AHER online portal so that students can access through their login credentials and the same has been demonstrated during the most difficult times. Further, the institute is well equipped with a digital library which hosts several thousands of books and journals readily accessible for students and teachers.

Priorities and Program Plans **ICT – Focus Areas**



Digital Journal of Clinical Medicine

In the era of Digital Technology and online learning, the concept of “Digital Journal of Clinical Medicine” is being introduced in order to help medical students learn in a better and more holistic manner. With smart phones and online learning gaining a significant role in every student’s life, it would only make sense to incorporate something that would be educative for them in a short span of time.

SWAYAM portal and MOOCs

Swayam is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.

Online Teaching

JSS AHER has stepped up to take its teaching online during the most difficult times making use of the ICT enabled services, Wi-Fi connectivity and E-Resources. The services provided were aptly rewarded.



Modular Laboratories



Innovation Centre

JSS AHER provides opportunities to incubate innovative ideas from both students and faculty. The innovation/incubation centre is called SPARKLE CINE. SPARKLE signifies Science Promotion through Advancement of Research & Knowledge for Life through Entrepreneurship, & CINE stands for Centre for INnovation & Entrepreneurship.

Sparkle CINE is a Section 8 company established under the aegis of JSS Academy of Higher Education & Research for the purpose of promoting translation of educational excellence to ideas and to catalyse the power of the idea towards innovation and entrepreneurship focused on advancement of Science.

Virtual Class and Laboratories



In view of providing experimental training for the students in the Physiology and Pharmacology Depts of University, the students, researchers and faculty are given the facility of training **through simulation technology** via Elsevier Animal Simulation Software across the University. This is an attempt to comply with the CPCSEA guidelines.

Outreach Programmes

The Motto of NSS "NOT ME BUT YOU" reflects the essence of democratic living and upholds the need for self-less service. NSS helps the students develop appreciation to other person`s point of view and also show consideration to other living beings. JSS AHER started NSS activities at its constituent colleges with important objectives of identify the needs & problems of the community & involve them in problem-solving and to develop among themselves a sense of social and civic responsibility. It helps the students to acquire leadership qualities and democratic attitudes, to develop capacity to meet emergencies and natural disasters and practice NATIONAL INTEGRATION and SOCIAL HARMONY. We have 5 NSS Units spread across the constituent college with a strength of 450 NSS volunteers and 5 NSS Program Officers.



JSSAHER'S Social Responsibility is an approach of ethical and intelligent management, which involves both its impact on its human, social and natural context, and its active role on the promotion of Sustainable Human Development of the country. Within this approach, "Sustainable Campus" is a strategy that strives to reduce the ecological footprint of the Institution via a rational use of resources and to educate the JSSAHER community on the ethics of sustainability.

4.3. SMART SPORTS & RECREATION

Health and well-being are an important aspect of academic success and retention; when a student is healthy in mind and body, they are better able to focus on and complete their studies. By taking measures to improve a student's health and well-being, an institution is actually helping its self by potentially increasing the student's GPA and graduation, and retention rates.

The goal is to have the campus community flourish and be fulfilled individually and within our communities where we live, learn, work, and play. As one of the vital stakeholders in Health & Well-Being, the Sports and Campus Recreation Complex should fulfill this vision by providing space and opportunities for students to discover and affirm their own well-being practices in five different dimensions (emotional, physical, social, professional and spiritual) that lead to a healthy lifestyle.

Playgrounds



Sport facilities-Indoor and Outdoor





Open Gym



Yoga facilities



Amusement park – Yet to create
Open air theatre – Yet to create
Swimming pool – Yet to build

4.4. SMART SAFETY & SECURITY

CCTV surveillance

The entire campus is under CCTV surveillance to ensure the safety of students around the clock. Majority of the laboratories are also equipped with cameras to attend to any accidents. Hostels are also continuously monitored through the cameras.

Fire alarms & Fire fighting



Peripheral safety

Round the clock security guards (Male & Female for respective hostels) as well as CCTV cameras are placed for continuous monitoring and vigilance for the safety of students.



Safety parameters

- High raised buildings are equipped with fire/smoke sensors.
- Regular workshops on safety management are being conducted for both faculty and students to help them handle emergency situations.
- Interaction with Laboratory managers and electricians should be facilitated for the safety of the campus. Their contacts should be displayed and readily available in case of emergency.

Visitor management system

Visitors are monitored and entertained only after getting prior consent from the concerned Department. Security offices are advised to keep a record of visitors who enter the premises.

Biometric system

Biometric system is already in practice for all the teaching and non-teaching faculty of the institution.

Anti-ragging & Women safety

Committee comprising of faculty against ragging and sexual harassment is highly functional and therefore such circumstances are completely avoided in the campus.

Hostel premises are equipped with about 120+ CCTV cameras and continuous surveillance under security personnel.



Student counselling system

An efficient committee for student counseling system has been constituted to further address issues of students both academically and personally. The system is integrating students, teachers and parents.

Hostel premises are equipped with cameras and continuous surveillance under security personnel. A regular check of food for nutrition and hygiene is carried out in order to provide safe health.

4.5. SMART WASTE, WATER & AIR MANAGEMENT

Sanitation and cleanliness



Waste materials being cleared by the municipality

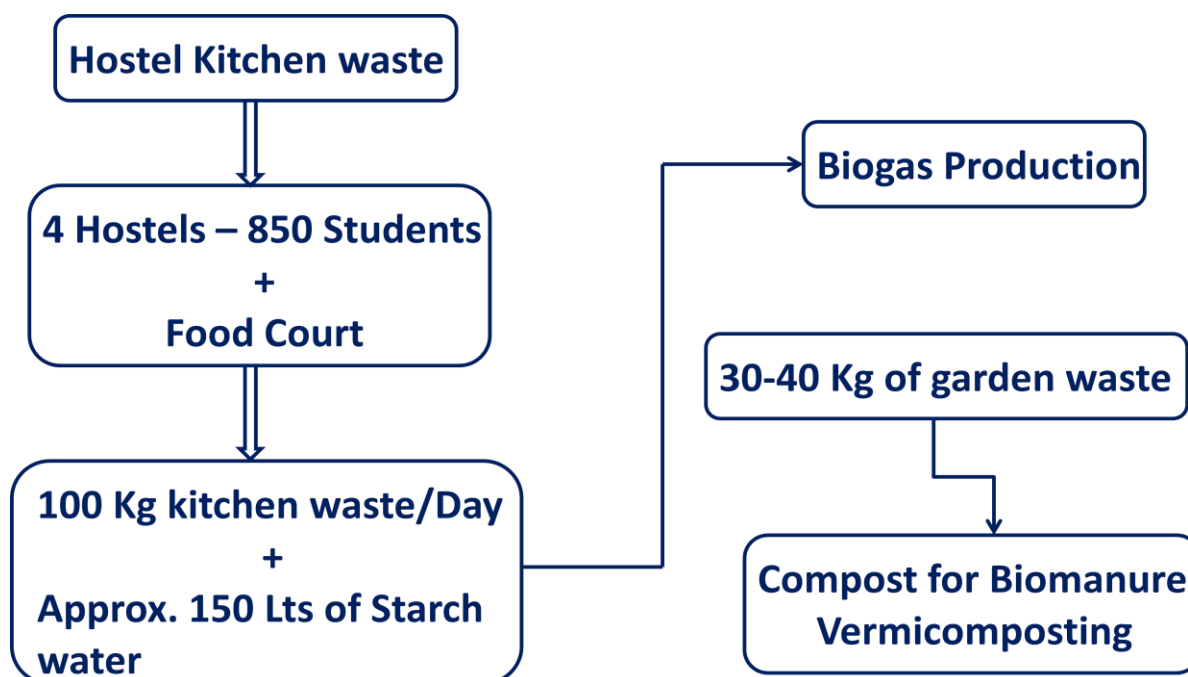


Colour coded bins for segregation of waste

Solid waste management

- Bio – medical waste management service is being availed since May 2003 (Dental & Medical) from M/s. Shree Consultants.
- Bio – medical waste management service is being availed (JSSCPM) from M/s. Gips
- Segregation and collection of dry and wet garbage is in practice.
- Color coded dustbins are provided across the campus.

Bio/food waste



Vermicomposting

Vermicomposting is the use of earthworms and microorganisms to accelerate the composting process. Worms, through digestion, liberate plant nutrients from organic material converting it to rich humus. Worms consume up to their own weight daily, excreting castings which contain from five to eleven times the amount of plant available nutrients in the material consumed. Worms have been recognized to play a very important role in the enhancement and maintenance of soil penetrability, redistribution of nutrients, water flow and gas exchange. The pedogenic value of worms, in addition to the release of nutrients, has vast applications in agriculture and soil reclamation. The vigorous ability of worms to convert organic residue into a nutrient rich growth medium also has applications in waste management.

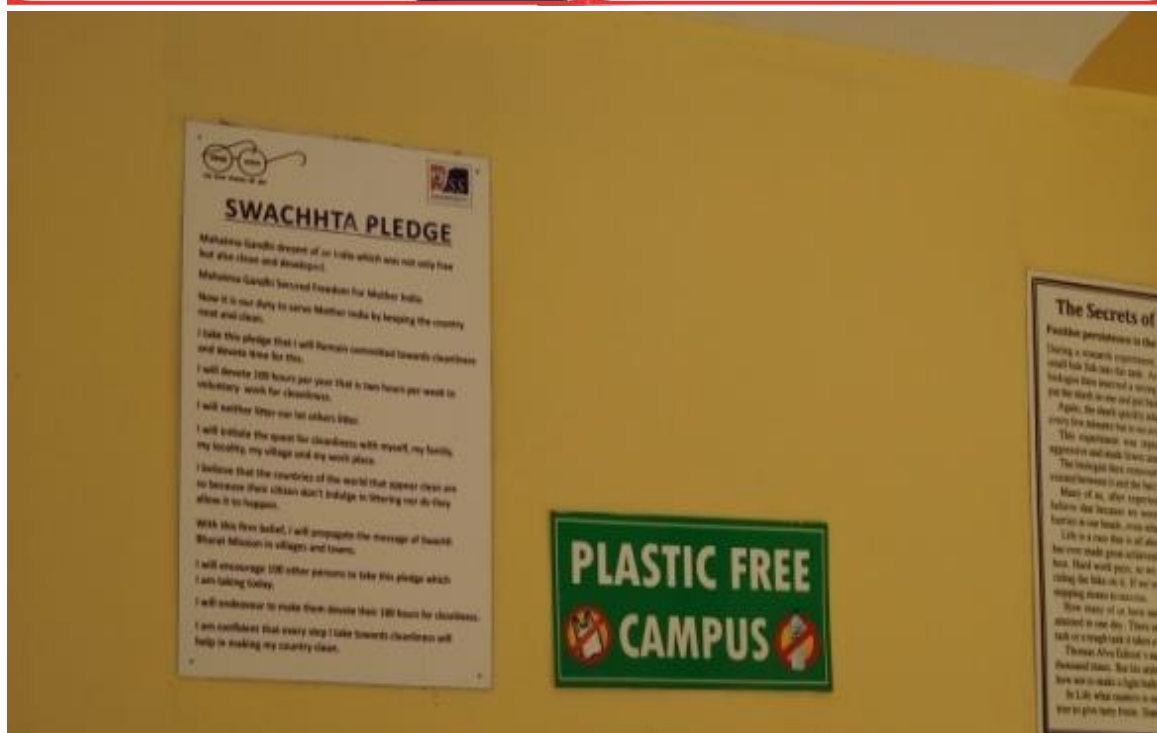


Need for a Vermicompost unit within the campus

Our Institute maintains a very good green carpet area making the campus a green environment. With a number of trees within the campus, accumulation of fallen leaves and other plant materials account to around 50 – 100 Kg of bio-waste which is being dumped and finally removed by external agencies. With the smart campus initiative gearing up, it is worthwhile to consider our own strategies to handle the waste generated within the campus. In this connection the vermicompost unit would come handy to handle the plant waste materials which not only will help us manage waste but also serves as a student centered project to produce bio-manure.



Plastic waste management



The Institute has pledged to reduce the use of plastics throughout the premises. Constantly the students and faculty are being advised not to use plastics wherever possible. JSS AHER is continuously supporting the Swachh Survekashan, an initiative by the city Municipal Corporation.

E-waste management

Certificate No.	MERA/1819/2015	Date: 2-MAY-2018
Date of Material Receipt	12-APRIL-2018	
Weight	610Kgs	
Customer Reference No.	MOU Dated 3-AUG-2017	



CERTIFICATE OF E-WASTE RECYCLING

*This is to Certify that e-waste received for recycling
from
JSS Academy of Higher Education & Research,
MYSURU-15
has been safely disposed at our registered facility in an environment friendly manner.*



For Mahalaxami e Recyclers


Authorized Signatory

MPCB Reg. No. : MPCB/RO(HQ)/REG/14/E-Waste/HWMD-182 | Date : 31st July 2014
Renewed Reg. No. : MPCB/RO(HQ)/REG-15/EWASTE/HWMD-257/Dt. 9th Oct. 2015 Valid till 8th Oct. 2020
Mahalaxami e-Recyclers Pvt. Ltd. Plot no: 1-5 (Part), Gokul Shirgoan MIDC, Tal : Karveer, Dist : Kolhapur | Website : recyclebin.com

Waste water management

Hostels, for instance are the main source of sewage water, while waste water from canteens, restaurants and campus buildings add up to the sewage. An effective sewage water treatment in a biological aspect can replace conventional chemical water treatment, as a need for sustainable green management is vital for a smart campus.

Student Projects/Pilot Projects are a main source of ideas that can be implemented after successful completion of the projects.

Sewage treatment plant



Existing small scale sewage treatment plant in the guest house

Usually a sewage treatment plant (STP) is considered as a liability and is only planned to comply mandatory regulations. But same can be made an asset that produces revenue at the same time addresses the mandatory environmental compliances.

An STP can be considered to be an industry where the raw material (sewage and food waste) is of reliable supply and available at no cost. The treated water which is the product of this unit can substitute fresh water required for gardening and thus reducing the current water bills and finally the biogas which can substitute/supplement LPG in the kitchens and reduce LPG bills. Below is brief overlook of a model:

- Raw material is reliable
- Raw material is free
- Treated water (end product) has demand
- By-product (biogas) out of treatment has a demand
- Sludge produced can be used as a valuable source of fertilizer for the landscape irrigation

The specific salient features of the ARBiT™ STP are listed below:

1. ARBiT™ STP can be commissioned and operated even with low occupancy of the college unlike other technologies that requires at least 40% occupancy in the college project.
2. The ARBiT™ STP will be located between the B & C Blocks of girls hostel.
3. The ARBiT™ water reclamation plant will be located below and above the ground.
4. Wastewater unseen during the treatment process.
5. Zero noise and vibration during operation.
6. Power consumption is very low and approximately 70% lesser than conventional systems

7. The area required for the STP is also approximately 30% lesser than conventional systems. This will also reduce on the civil construction cost effectively reducing the capital required.
8. The odor produced from the STP will be collected, contained and discharged without causing inconvenience to the occupants or neighbors.
9. The quality of the treated water will meet the reuse standards specified by Karnataka State Pollution Control Board.
10. The disinfection of the treated effluent may be done using Hypochlorite.
11. The biogas generated during the treatment process can be used for beneficial purposes if required.
12. Optional treatment for the disposal of the organic solid waste from the canteens can be integrated with this ARBiT™ STP. High volumes of biogas can be generated and may be supplied to the canteens to reduce the LPG consumption or generate electricity.

Proposal of the STP to address the wastewater treatment for the girls hostel

As seen during the site inspection, we propose the location to establish next to the compound wall between the B&C block

The capacity of the plant: 90 KLD (detailed calculations given in the proposal)

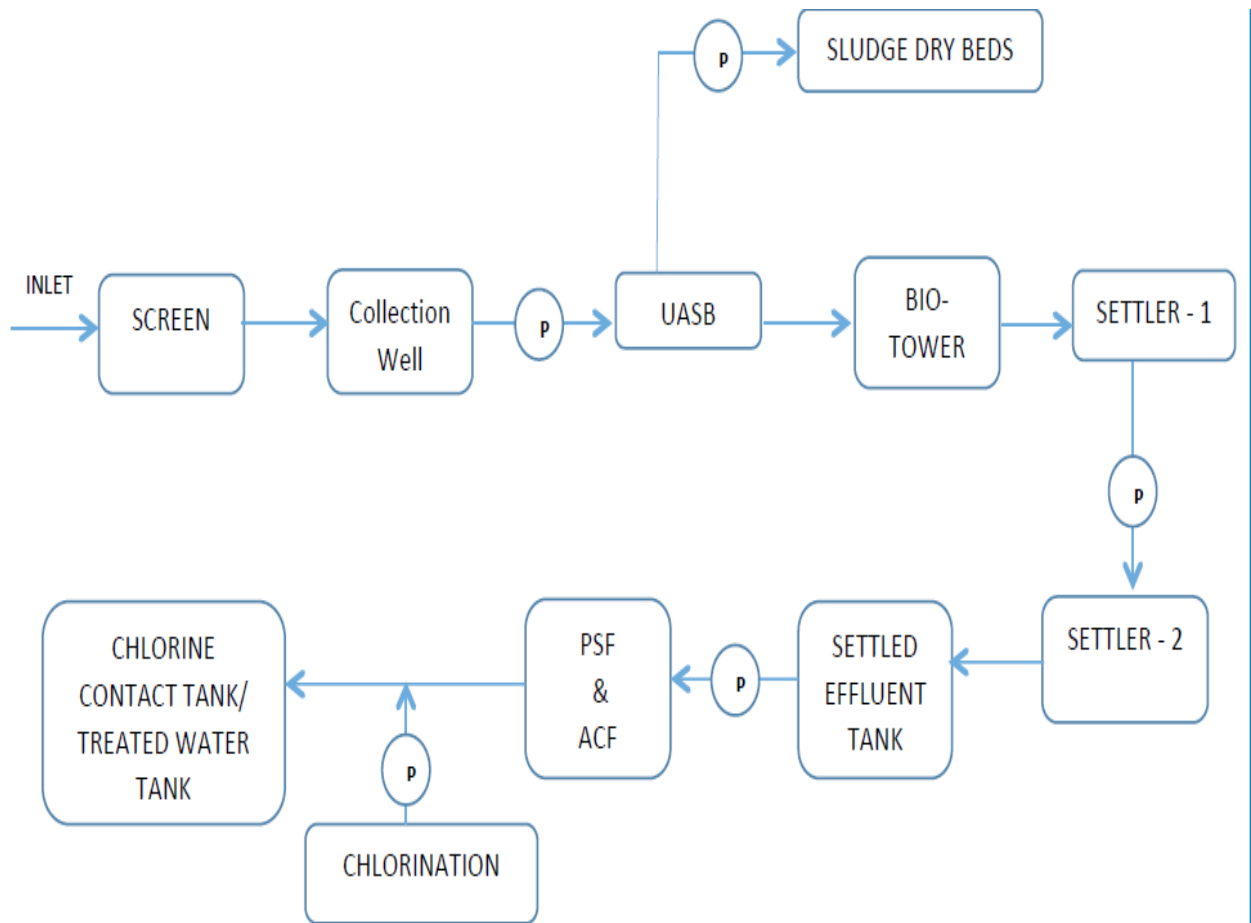
Implementing the biogas utilization unit along with the STP is possible since the leftover food from the canteen and the organic wet waste from the kitchen is very nearby and can be converted into biogas. The biogas is produced both from the sewage and left over food and vegetable waste.

The expected production of biogas per day equivalent of LPG is: 30 Kg which works out to Rs 47,400/- per month savings. The treated water can be used for the gardening and toilet flushing with small change in the plumbing. Recycling water will also reduce the fresh water consumption and in turn reduce the water bills.

The project thus meets the sustainability aspects, economical and entire campus become "Green".

ARBiT™ PROCESS

The ARBiT™ process (Anaerobic Reactor with Bio-tower) is a combination of both anaerobic and aerobic treatment of wastewater. The wastewater is first introduced into an anaerobic reaction tank (UASB tank) with a designed retention time. A floating sludge blanket is formed inside the UASB reactor under anaerobic conditions. Anaerobic degradation of organic matter (BOD) is achieved up to 75-80%. The overflow of this reactor is fed into the bio-tower for further removal of BOD under aerobic conditions.



Flowchart of the processes of water reclamation plant

Automatic sensor taps

The institute has fixed touch sensor water taps during the first phase to validate the use of such taps. Following the data of water saved, automatic sensor taps may be installed during the second phase of up gradation.

Air monitoring system – Yet to be initiated

4.6. **SMART UTILITIES – WATER, GAS & ELECTRICITY**

Water conservation

- Awareness program shall be held in campus once in 3 months for Sensitizing the staff and students
- The students in hostels shall be sensitized about water conservation in their orientation meetings.
- Printed stickers / labels with the slogan ‘Save Water’ to be fixed in strategic places of the college and hostels.
- Reducing car washing and the vehicles on the campus shall be washed based on the real needs rather than regular washing.
- The gardens shall be irrigated only with sprinklers and drip irrigation systems to save the wastage of water in plantations.
- All the existing flushes in the toilets to be changed into dual flush system in a phased manner.
- Sticker Reminders as part of the ‘Energy Awareness Campaign’ shall be placed near taps to remind everyone to conserve water by reducing wastage and closing the tap.

Recycle

- Green wastes shall be composted and reused as composts manure.
- All the waste bins to be replaced with dual bins with tag and pictorial signs “biodegradable waste” & non-degradable waste”.
- The biowaste disposal shall be only through Government approved disposal service contracts.

Rainwater harvest

To meet the needs and sustainable management of fresh water, the rainwater harvesting and utilization systems have been established in all the campuses of the JSSAHER to aid towards the greater objectives of water management and conservation and increasing recharge of groundwater by capturing and storing rainwater, rainwater harvesting from rooftop run-offs and natural water bodies and the community development. The below-mentioned models are established in the various buildings based on the size of the building and the extent and topography of the land.

The systems include –

- Simple roof water collection systems - Most of the rooftop rainwater harvesting has been completed by constructing five water storage structures with a storage capacity of 1000 m³.
- Land surface catchments – a simple way of collecting rainwater by retaining the flows (including flood flows) of small creeks and streams in small storage reservoirs (on surface or underground) created by low-cost dams.

- Collection of storm water – The surface runoff collected in storm water ponds/reservoirs is subject to a wide variety of contaminants and every effort is made to keep these catchments clean

JSSAHER and the constituent colleges shall continue to establish a combination of the above techniques to have meet the groundwater needs.

JSS Academy of Higher Education & Research (JSSAHER) is conscious of its responsibility and role in materializing its green policy using renewable energy, management of its water resources, and disposal of waste.

Purpose

In order to minimize energy usage, improve the efficiency of all energy/ resources (natural resources, water, electricity) consuming systems and equipment, and improve the environment in all facilities, JSS Academy of Higher Education & Research has adopted an energy / resources conservation and recycling policy.

Definitions

- Energy conservation: Energy conservation is a practice of decreasing the quantity of energy used and achieved through efficient energy use.
- Recycle: Recycle is a process of collecting and reprocessing materials that would typically be considered waste.

Policy

Conservation of energy and natural resources and recycling process is an integral part of JSS Academy of Higher Education & Research (JSSAHER) facilities' design and usage. The JSSAHER employs a variety of energy conservation, recycling, and other techniques to lessen the consumption of resources and achieve the lowest feasible life cycle costs. However, occupant health, safety, comfort, and program requirements shall always be the primary concerns. Energy conservation measures will be achieved by using the most cost-effective, energy-efficient approach with consideration given for flexibility of use and future remodeling convenience. Recycling efforts are encouraged at the Institution/department level.

Responsibilities

- All faculty, staff, students, design consultants, and construction contractors must observe energy and resource conservation measures employed by the campus.
- The Campus Facilities Maintenance & Management Authority- Deputy Registrar shall be the principal coordinator of all design disciplines, which includes responsibility for the implementation of this policy.
- Constituent Colleges & Departments shall be responsible for internal energy conservation, recycling efforts.

Related Policies

The energy conservation and recycling policy of JSS AHER supports

- Smart Campus Policy of JSSAHER
- The Swachh Bharat Mission (Urban) guidelines- Government of India.

- National conservation strategy and policy statement on environment and development- Government of India.

A survey of water utility and storage in the Medical Institutions Campus is given below

BUILDINGS	WATER CAPACITY
Main Over Head Tank	4,50,000 Ltr
Main Over Head Sump	2,00,000 Ltr
Over Head Tank Entrance	50,000 Ltr
Girls Hostel D Block Sump	85,000 Ltr
Girls Hostel D Block OHT	75,000 Ltr
Boys Hostel Sump	40,000 Ltr
MC Over Head Tank	30,000 Ltr
Guest House Sump	87,000 Ltr
Guest House OHT	25,000 Ltr
Canteen Sump	10,000 Ltr
Canteen OHT	10,000 Ltr
Total	10,62,000 Ltr

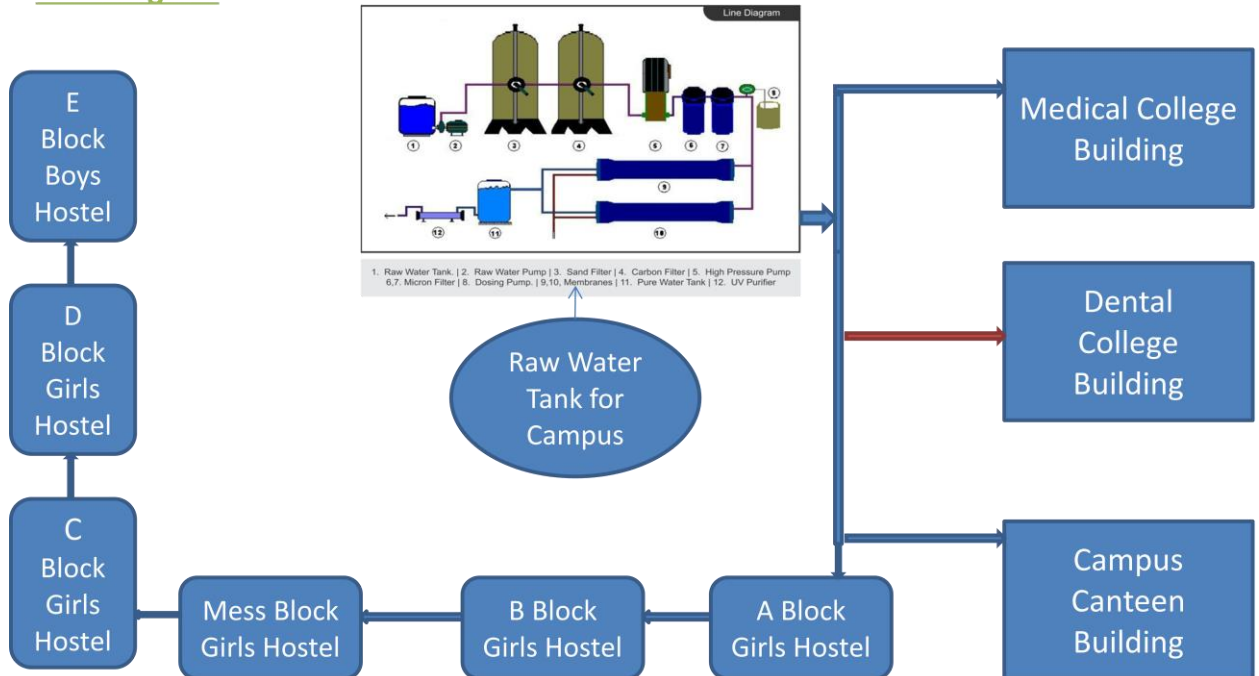
RAIN WATER HARVESTING / RO PLANT / WATER MANAGEMENT

- ✓ Rain water harvesting collection tank of 30,000 ltrs storage capacity.
- ✓ 10 no's of Ground water & bore well recharge pits and infiltration tank of about 15,000 ltrs capacity.
- ✓ STP of 25 KLD capacity by using SWR technology has been installed for treating of sewage & kitchen waste water of PG Guest Hostel & the treated water is using for the purpose gardening area developed surrounding the building.
- ✓ One tank of 10,000 ltrs capacity is made for re-use of RO rejected water for gardening purpose
- ✓ Water sprinklers are in place

RO WATER SUPPLY - CURRENT SCENARIO

An overview of the drinking water facility and the current situation of the RO plant installed in the campus help us to think how we can upgrade the RO plant to fulfill the RO water requirement for the entire campus. The present RO plant installed is not sufficient to fulfill the RO water requirement for the entire campus.

Line Diagram



Inspection Report

- 1) The entire campus has a one Commercial RO plant of capacity 3000 LPH.
- 2) Plant needs to be upgraded to fulfill the present requirement of the drinking water.
- 3) The product output of the plant is having only 40% of permeate water Only
- 4) The RO water is been distributed in 2 different lines for the entire campus.
 - a) Line 1: Dental Block, Campus Canteen Block & Medical Block.
 - b) Line 2: Girls Hostel A , B , C , Mess Block , D Block Canteen and Continued to Boys Hostel E Block.
- 5) The pump which is been used for the distribution of the RO water is a Cast Iron mould pump and impeller gets rusted inside the pump & discharge rust particles which gets mixed in the drinking water.
- 6) The Pipe line laid to distribute the RO water should be in CPVC. But in Dental Block GI line has been laid which discharges high rust which is getting settled in the drinking water.

- 7) All the Water which is been treated through RO plant is been Stored in a Syntex tank on the roof top of each and every building without the storage tank Lid and Instead they are using a wooden plank or a black stone slab to cover the same.
- 8) Since it is Purified water it has to be kept in a closed environment to avoid dust and microbes OR ELSE THERE IS NO POINT IN PURIFYING THE WATER.
- 9) Rest of the Blocks distribution pipe line in Boys and Girls hostel is CPVC can be retained.
- 10) The Storage water tank of the RO water should be in SS (Stainless Steel)but all the storage tanks which is been installed is Syntex tank.
- 11) Using Syntex tank for drinking water storage is not suggested, because it reacts when sunlight falls on tank. Since all the tanks are kept in open terrace.
- 12) All the storage tanks should be sheltered to avoid bio aerosol and dust



Current status of the RO Water Plant at the MCI

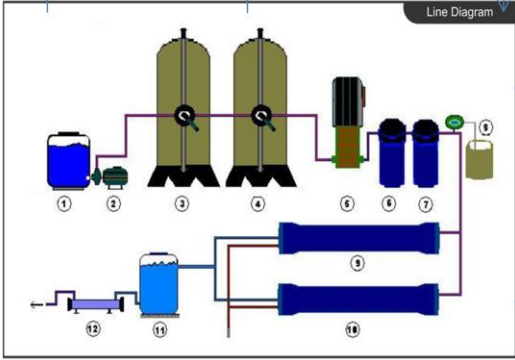
D BLOCK
 Floors : 4 Floors
 Students : 72
 Drinking Water
 Usage : 250

A BLOCK
 Floors : 4 Floors
 Students : 78
 Drinking Water
 Usage : 250

Mess Block
 Floor : 2 Floors
 Number of
 Students : 750
 Floating
 (3 Times Food)

E BLOCK (RO Plant)
 Floors : 4 Floors
 Students : 150
 Drinking Water
 Usage : 450

B BLOCK
 Floors : 4 Floors
 Students : 65
 Drinking Water
 Usage : 200



1. Raw Water Tank | 2. Raw Water Pump | 3. Sand Filter | 4. Carbon Filter | 5. High Pressure Pump
 6,7. Micron Filter | 8. Dosing Pump | 9,10. Membranes | 11. Pure Water Tank | 12. UV Purifier

C BLOCK
 Floors : 4 Floors
 Students : 54
 Drinking Water
 Usage : 150

D Block
 Floors : 7 Floors
 Number of Students :
 600
 Water Consumption per
 day 2000 Liters

Proposed upgradation of RO Water Plant at MCI

Schema A:

- 1) Upgrading the commercial RO Plant in the campus to 6000 LPH to Centralized RO plant and decentralizing the distribution of drinking water to the entire campus with Storage tank in each block with automatic filling.
- 2) RO Plant room has to be expanded by another 300 Sqft.
- 3) CPVC Pipe Line has to be laid to the distribution units.

Time Period: To complete the above process setup it would require one month time.

Tentative Budget:

- a) RO Plant Only : 15 Lakhs Rupees + 18% GST
- b) RO Room Building : 6 Lakhs
- c) Pipe Laying including Material Cost: 95 Rupees per feet
- d) Storage Tanks, Pressure Boosting Pumps and Fittings can be designed only after exact requirement which will be an additional cost.



Overview of the RO water distribution in the MCI campus hostels

Energy conservation measures

Light Bulb Replacement

- It is estimated that replacing traditional incandescent bulbs with CFLs/LED can cut lighting costs by up to 75%. JSSAHER, Constituent Colleges & Departments shall exchange such traditional incandescent bulbs across campus with CFLs/LED in a phased manner. Thus 75 % of the bulbs shall be changed with CFLs/LEDs by 2017.
- Sticker Reminders as part of their 'Energy Awareness Campaign' shall be placed on switch boards to remind everyone to conserve energy by turning off the lights.
- Small pamphlets emphasizing the importance of energy saving shall be prepared and circulated to all the staff and students of the college.
- Solar water heaters installed in colleges and hostels and especially for cooking, solar energy is utilized in the hostels and in guest houses. Step shall be taken to replace use of LPG completely with solar energy by 2020.

ELECTRICITY - UNDERGROUND CABLE WORKS COMPLETED







Underground Cable works and power backup

POWER / ELECTRICITY (Power back up: 24 x 7)

JSSAHE&R provides has created the facility of providing 24 x 7 power / electric supply either in the form of power connection through CHESCOM / TNEB and in case of failure in power supply, generators are installed in all the campuses for providing uninterrupted electric / power supply.

Campus	RR No.	Contracted Demand in KVA	Motor Constant	Date of Connection / Service	Generator
JSSMI Campus	HT - 166	450 KVA	2500	May 1995	2 dedicated generators of 450 KVA & 500 KVA capacity is provided with auto switch over facility
JSSCPM Campus	HT - 384	150 KVA	750	May 1995	82.5 KVA & 160 KVA
JSSCPO Campus	HT - 107	150 KVA	200	May 1995	100 KVA, 125 KVA & 150 KVA capacity is provided

Solar Projects



At the Institution level, solar panels have been installed which has considerably brought down the power consumption by at least 50% compared to earlier years. In order to set an example, the institution shares some of the electricity generated by solar energy to the local electricity board. Proper signages have been installed advising the users to always switch off the electricity when not in use.

Most of the lights have been replaced by energy saving bulbs and LEDs to save power. Continuous monitoring and maintenance of Air Conditioning, generators and other power appliances are being carried out to ensure that no power is being wasted under any circumstances.



Emergency power backup & smart micro grids



Proper lighting

All the institutions campus of JSSAHE&R at Mysuru and Ooty are provided with LED lightings to promote security in the campus and to increase the quality of life by artificially extending the hours in which it is light and for the safety of hostel students.



Summary of power generation with the aid of solar panels

1	2				3		4		5	6
Month	KEB				Solar Units Generated		Total		KEB Rate	Saving
	A	B	C	D	A	B	A	B		
	Import Units KEB	Export Units from Solar	Actual Consumption of Units (2A-2B)	Amounts	Total Units	Amounts	Units	Amounts (2D+3B)		
Apr-19	144450	0	144450	1314716	0	0	144450	1314716	1314716	0
May-19	153225	0	153225	1419601	11909	73835.8	165134	1493436.8	1535134	41697.2
Jun-19	118150	75	118075	1096122	24708	153189.6	142783	1249311.6	1332678	83366.4
Jul-19	109425	450	108975	1023980	22879	141849.8	131854	1165829.8	1231164	65334.2
Aug-19	101250	1025	100225	944791	35607	220763.4	135832	1165554.4	1267196	101641.6
Sep-19	93125	4325	88800	850504	46215	286533	135015	1137037	1266547	129510
Oct-19	96375	7275	89100	852928	53755	333281	142855	1186209	1337953	151744
Nov-19	89025	10125	78900	764651	60973	378032.6	139873	1142683.6	1310793	168109.4
Dec-19	83575	9025	74550	720964	54812	339834.4	129362	1060798.4	1204710	143911.6
Jan-20	85600	3975	81625	781752	72663	450510.6	154288	1232262.6	1429742	197479.4
Feb-20	81425	17675	63750	628170	69004	427824.8	132754	1055994.8	1235333	179338.2

Mar-20	76300	19800	56500	560793	66086	409733.2	122586	970526.2	1132504	161977.8
Total	1231925	73750	1158175	10958972	518611	3215388	1676786	14174360	15598470	1424110

4.7. SMART SERVICES & CONNECTIVITY

Available Facilities

- Dental Hospital (366 dental chairs)
- Dental Mobile Van (*1 no. for community services*)
- Bank
- Post Office
- Pharmacy
- Co-operative Society
- Laundry / Cobbler
- Telecommunication
- Incinerators
- Photo copiers and bindings
- Health Insurance services(TATA AIG)
- JSS University NSS Unit
- Free Wi-Fi
- Common communication social platform like a link that connects faculty, students and the institute.
- An in house pharmacy is functioning within the campus to cater the needs of students as well as public.

Amenities- Bank, Food court, Stationery, pharmacy

BANK

A branch of State Bank of India at S. S. Nagara, Mysuru shares its banking services with the JSSAHE&R in the JSSMI Campus. The 24 x 7 ATM counter is also attached to the JSSMI Campus Building for easy access to the students.



Post office

Both the Post Office (Sub Branch) and the Telegraph Offices are in the campus for easy access of students and staff.



Co-operative society

The co-operative society is also a part of the institution, which cater to the needs of the students with their essential daily requirements and other requirements such as text books, note books, papers, surgical items, etc. The society works on '**no profit - no loss**' basis.



Food Court



Health centre with pharmacy



4.8. SMART GREEN ENVIRONMENT RESILIENCE

The beauty of nature is a gift of God, and as responsible citizens it is our duty to protect this gift by all means. Hence, following actions are initiated by JSSAHE&R towards Green Initiative:

- a) Greenery / Plantation
- b) Prohibition on use of Plastic bags and bottles
- c) E – scrape
- d) Use of Incinerators
- e) Solar – Power, Water Heater, Cooking System





**GREEN CAMPUS
CLEAN CAMPUS
PLASTIC FREE CAMPUS**

SPEED LIMIT 20 km./h.		WEAR HELMET 
NO SMOKING 	NO ALCOHOL 	NO DRUGS 
I WILL SALUTE IF YOU DON'T POLLUTE 	YOU ARE UNDER CCTV SURVEILLANCE 	

The Medical Institutions campus maintains a very well developed green carpet throughout the campus.



Recently more arrangements have been made for better parking.



Reduction of carbon foot prints in the atmosphere is a challenging task

A complete tree survey has been completed with the help of eminent botanists and students in the whole of Medical Institutions campus. The survey is vital in order to understand the distribution of plants and their level of carbon uptake.

4.9. **SMART GOVERNANCE**

Existing Facilities:

- Periodical seminars & conferences,
- Faculty development programme
- Hands on training
- Skill development programs (*computer, Tally, Simulation, Software, Access to data bases*)
- JSSU Online Platform
- Computers / Laptops / Printers / Scanners / Photocopier's / Projectors etc., are provided based on requirement to the administrative & supportive staff and for the Depts., as required.

Strengths of the Institution – A Health Sciences focussed Institution

Dynamic and visionary leadership provided by the authorities and officers of the University

Good governance driven by the expertise and wisdom of eminent personalities serving on the Board of Management, Academic Council, Finance committee, Planning, and Monitoring Board and other authorities

Providing leadership regionally, nationally and internationally

Academic excellence as exemplified by excellent human resource, infrastructure, and contemporary curriculum

Faculty who are distinguished, committed and from across the country National and International student diversity that serves as the melting pot of cultures

Distinguished leaders in academics, research, and policy as Adjunct and Visiting faculty National and International Collaborations with eminent universities, institutions, and organizations

Research excellence that is exemplified by the PI-driven nationally and internationally funded research, publications, patents and research programs leading to the award of Ph.D.

Infrastructure excellence that meets the academic, research, residential, extension, and student support needs

Financial sustainability and administrative autonomy that supports the continued growth of the University

Students & Alumni have always been instrumental in supporting the academic and research activities. The alumni are well placed as entrepreneurs, academicians & researchers and they bring laurel to institution through awards and achievements.

Global Engagement through strategic MoU's, staff / student exchange programs, International accreditations and outreach

Outreach through the State of the art Hospital with facilities catering to the diverse health needs and supporting the teaching, training and research programs of the University

4.10. **SMART FOOD & HEALTH**

JSS Academy of Higher Education & Research (JSSAHER) is committed to its “JSSAHER Social Responsibility Statement & Vision” to provide sustainable, eco friendly smart campus. The “Food & Supplies Policy” is related to procurement, storage and maintenance of food at (JSSAHER), which is a part of “Smart Campus Policy”. This policy provides provisions through which food to be procurement, stored, maintained and delivered to all the constituent colleges and departments of JSSAHER.

JSSAHER and its constituent colleges and departments are responsible in working with suppliers, contractors and partners to minimize environmental effects related to services and supports local suppliers and that all procurements represent value for money. All stakeholders shall assist JSSAHER in meeting the sustainable food & supply policy.

This policy is focused on but not limited to provision and procurement of food at JSSAHER. It applies to all aspects of sustainable food, including procurement, provision preparation, waste management, education, awareness and services.

JSSAHER ensures that:

- Procurement, storage and maintenance of food is reliable, safe and represent value for money.
- Environmental and social responsibility is factored in to all tenders and contracts and encourages small sized businesses.
- Suppliers are committed to sustainable use of transport, packaging, storing etc. Communication on progress made during the contract period.
- Recycling process for quantities and effective waste reduction.
- Usage of biodegradable packaging whenever possible.
- Recycling and reuse where applicable.
- Minimizing wastage while procurement, storage, maintenance and deliver.
- To serve sustainable food and to reduce plate waste.

Roles and responsibilities:

- JSSAHER and its constituent colleges and departments shall procure food in a sustainable manner in accordance with the “JSSAHER Social Responsibility Statement, Smart Campus Policy”, which are available from the JSSAHE’s website <https://jssuni.edu.in>.
- The Deputy Registrar has overall responsibility for the implementation and delivery of the policy within The University’s catering department. However, different colleges and departments shall have particular responsibility for managing aspects relevant to the department.
- Responsibility for application of the principles and practical delivery of this policy within the college in general lies with the Administrative Officers.
- Responsibility for application of the principles and practical delivery of this policy within catering services lies with the hostel wardens, catering managers and teams.
- JSSAHER shall promote sustainable food to customers to increase awareness and sales through meetings and workshops.
- Any changes to our sustainable food practices will be communicated on an annual basis as a summary report.

- The summary report will be produced by the Campus Maintenance Committee following an annual review by the Registrar and Deputy Registrar.
- Promote and supply seasonal fruit and vegetables to customers.
- Engage suppliers to measure the amount of local and seasonal fruit and vegetables and use to help with procurement decisions.
- Increase the procurement and consumption of organic food, focusing on the health, well-being and environmental benefits.
- Move all disposable products to biodegradable alternatives where possible and reduce the amount of disposables used.
- Ensuring tap water and drinking water is available at every catering outlet
- Eco friendly and effective cleaning materials.
- Send zero food waste to landfill directly and recycle all waste.
- Encouraging sustainable food: Contribute to thriving local economies and sustainable livelihoods. Protect the diversity of both plants and animals and the welfare of farmed and wild species, and avoid damaging natural resources.
- Support a culture of healthy eating
- Provide social benefits, such as good quality food, safe and healthy products, and educational opportunities
- Sustainable procurement is partly about buying and sourcing green products but it's also about ensuring energy and resource efficiency as well as long term cost effectiveness.
- Fair-trade on better prices, decent working conditions and local sustainability.
- Saving costs measured across the whole lifecycle of a product
- Decisions on procurement and accreditation should be made on the basis of a rational assessment of value, ethics and market trends.

The Policy Supports:

- The Swachh Bharat Mission (Urban) guidelines, Government of India.
- National conservation strategy and policy statement on environment and development, Government of India.
- National Cyber Security Policy, Ministry of Communication and Information Technology, Government of India.

JSS Institute hostels are well known for its aesthetic food and hygiene. The Institute follows strict vegetarian food both in hostels and food court. A regular check on food and hygiene is carried out to ensure safe health of the students.

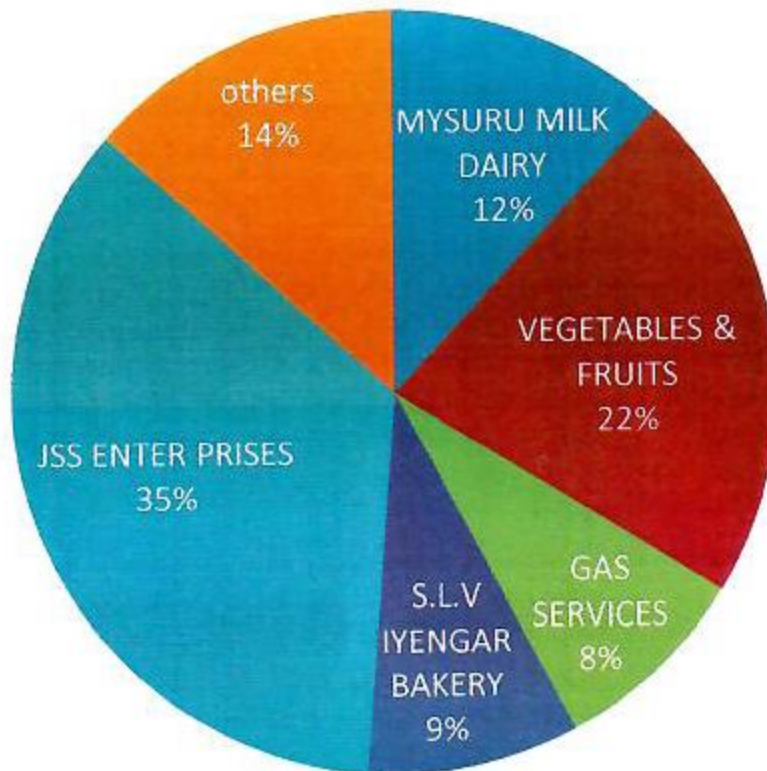
Existing Facilities:

- Food Court (*80 seating capacity*)
- Coffee vending machine
- JSS Health Center
- Mess / Kitchen (3+1 +1 Nos)
- Staff Dining Hall – 2 no's. (JSSU)
- Dining Halls @ Hostels, Guest House, Food Court (5 no's.)

JSS Institutions are already contributing to the reduction of carbon foot print by following strict vegetarian food habits throughout the entire campus.

Further, it is necessary to give orientation to the students regarding the practice of low carbon food and diet.

Hostel officials, care takers and cooks are being trained on the importance of cleanliness and hygiene in the kitchen premises. JSS Institutions ensure that quality food commodities and raw materials are procured from approved vendors and local clean markets.



The pie chart depicts the procurement strategies of JSS AHER

Summary

BUILDING & INFRASTRUCTURE

- Accessibility
- Safety and Security
- Energy efficient
- Rain Water Harvesting
- Walkable campus
- Bicycle
- Sustainable Transport
- Road network

SAFETY & SECURITY

- CCTV surveillance
- Fire alarms
- Fire fighting
- Peripheral safety
- Visitor management system
- Biometric system
- Anti-ragging

SERVICES & CONNECTIVITY

- Online services
- Amenities- Bank, Food court, Stationery, pharmacy
- Wi-Fi Services

EDUCATION, LEARNING & DIGITIZATION

- Smart Classroom
- E-Resources
- Wi-Fi Connectivity
- ICT Enabled services
- Modular Laboratories
- Innovation Centre
- Virtual Class and Laboratories
- Outreach Programmes

WASTE, WATER & AIR MANAGEMENT

- Sanitation and cleanliness
- STP
- Solid waste management
- Plastic waste management
- E-waste management
- Automatic sensor taps
- Air monitoring system

GREEN ENVIRONMENT RESILIENCE

- Green Campus
- Landscaping
- Preserving open space
- Soil erosion control
- Ground water recharging

SPORTS & RECREATION

- Playgrounds
- Sport facilities- Indoor and Outdoor
- Recreational space
- Open Gym
- Yoga facilities
- Amusement park
- Open air theatre
- Swimming pool

UTILITIES

- Solar Projects
- Smart lighting System
- Emergency power backup
- Smart micro grids
- Bio-gas plant
- Kiosks

GOVERNANCE

- ERP
- Less paper Office
- Training and Development
- ART- Accountability, Responsibility, Transparency

FOOD & HEALTH

- Wellness Centre
- Health Centre
- Potable water facility
- Personal Hygiene
- Nutritional Values
- Dietary

Short Term Goal

Most of the elements related to Smart Campus have been achieved. However, it can be claimed thus only after a valid certification that needs to be carried out by an authorized third party.

Godrej Services has been identified as one of such client to carry out the validation process in line with Institutional Green Building Council (IGBC).

IGBC Green Campus Rating System

- ❖ It is applicable for buildings which are in design stage as well as operational
- ❖ Is applicable for campus with multi-functionality buildings
- ❖ Is majorly done for addressing the infrastructure design of the campus
- ❖ Influences the individual buildings to opt for green building rating program
- ❖ Addresses the complete water, energy and waste management on a holistic approach

IGBC GREEN CAMPUS – CREDIT CATEGORIES

S.No.	Category	Points
1	Site Planning & Management	22
2	Sustainable Transportation	11
3	Water Conservation	18
4	Energy Efficiency	21
5	Material & Resources	03
6	Health & Well being	06
7	Green Education (GE)	03
8	Innovative Practices	06
	Total	90

IGBC GREEN CAMPUS – SITE PLANNING & MANAGEMENT

Credits	Category
SPM MR 1	Green Buildings within the campus
SPM MR 2	Soil Erosion control
SPM Credit 1	Green Buildings within the campus
SPM Credit 2	Site Preservation
SPM Credit 3	Green Cover & Vegetation
SPM Credit 4	Heat Island Reduction, Non-roof
SPM Credit 5	Outdoor Light Pollution Reduction

IGBC GREEN CAMPUS – SUSTAINABLE TRANSPORTATION & WATER CONSERVATION

Credits	Category
Sustainable Transportation	
ST 1	Pedestrian Network
ST 2	Bicycle Lane Network
ST 3	Access to sustainable transport
Water Conservation	
WC MR 1	Rain water harvesting
WC Credit 1	Rain water harvesting
WC Credit 2	Landscape Design
WC Credit 3	Management of irrigation system
WC Credit 4	Waste water treatment & Reuse
WC Credit 5	Optimise water use for construction
WC Credit 6	Water metering

IGBC GREEN CAMPUS – ENERGY EFFICIENCY

Credits	Category
Energy Efficiency	
EE Credit 1	Energy Efficiency in Infrastructural Equipment
EE Credit 2	On-Site Renewable Energy
EE Credit 3	Off-Site Renewable Energy
EE Credit 4	Energy Metering

IGBC GREEN CAMPUS – MATERIALS & RESOURCE MANAGEMENT

Credits	Category
Material & Resource Management	
MRM Credit 1	Segregation of Waste
MRM Credit 2	Organic Waste Management
MRM Credit 3	Handling of Construction Waste
MRM Credit 4	Local Materials

IGBC GREEN CAMPUS – HEALTH & WELL BEING

Credits	Category
Health & Well Being	
HWB MR 1	Tobacco Smoke Control
HWB Credit 1	Basic Amenities
HWB Credit 2	Health & Well Being Facilities
HWB Credit 3	Universal Design
HWB Credit 4	Basic Facilities for Construction

IGBC GREEN CAMPUS – GREEN EDUCATION

Credits	Category
Green Education	
GE Credit 1	Green Education
GE Credit 2	Green Campus Guidelines

IGBC GREEN CAMPUS – CERTIFICATION LEVELS

Certification Level	New Campus	Existing Campus	Recognition
Certified	40 - 49	36 - 44	Best Practices
Silver	50 - 59	45 - 53	Outstanding Performance
Gold	60 - 74	54 - 66	National Excellence
Platinum	75 - 100	67 - 90	Global Leadership

Budget

Accordingly, financial implications are as below:

1. Feasibility study, Facilitation, Energy modeling and Fundamental & Enhanced commissioning fee is proposed for **Rs. 6,40,000/-**.
2. **IGBC Fee details:**
 - Registration fee ---> Rs. 30,000
 - Certification fee ---> Rs. 3,68,000
 - **TOTAL ---> Rs. 3,98,000**

Thus, the total financial implication would be around **Rs. 10,38,000/-**

Time Line

Gold certification could be attained in a period of 6 months.

Long Term Goals

Aligning the Key Elements of Smart Campus in line with the Sustainable Development Goals (SDGs) of the UNO

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. Today, the Division for Sustainable Development Goals (DSDG) in the United Nations Department of Economic and Social Affairs (UNDESA) provides substantive support and capacity-building for the SDGs and their related thematic issues, including water, energy, climate, oceans, urbanization, transport, science and technology, the Global Sustainable Development Report (GSDR), partnerships and Small Island Developing States. DSDG plays a key role in the evaluation of UN system wide implementation of the 2030 Agenda and on advocacy and outreach activities relating to the SDGs. In order to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment by all stakeholders to implement the global goals.

SUSTAINABLE DEVELOPMENT GOALS





S. No	SMART CAMPUS KEY ELEMENTS	SUSTAINABLE DEVELOPMENT GOALS (SDGs)
1	BUILDINGS & INFRASTRUCTURE	SDG 9 (Industry, Innovation & Infrastructure), SDG 11 (Sustainable Cities & Communities)
2	EDUCATION, LEARNING & DIGITISATION	SDG 4 (Quality Education), SDG 15 (Life on Land)
3	SPORTS & RECREATION	SDG 3 (Good Health & Well- Being)
4	SAFETY & SECURITY	SDG 16 (Peace, Justice & Strong Institutions)
5	WASTE, WATER, AIR MANAGEMENT	SDG 6 (Clean Water & Sanitation)
6	UTILITIES - WATER, GAS, ELECTRICITY	SDG 7 (Affordable & Clean Energy), SDG 12 (Responsible Consumption & Production)
7	SERVICES, CONNECTIVITY & RETAIL	SDG 12 (Responsible Consumption & Production)
8	GREEN ENVIRONMENT RESILIENCE	SDG 13 (Climate Action), SDG 14 (Life Below Water)
9	GOVERNANCE	SDG 1 (No Poverty), SDG 5 (Gender Equality), SDG 8 (Decent Work & Economic Growth), SDG 10 (Reduced Inequalities), SDG 17 (Partnerships for the Goals)
10	FOOD & HEALTH	SDG 2 (Zero Hunger), SDG 3 (Good Health & Well-Being)

SUSTAINABLE DEVELOPMENT GOAL RANKS OF JSSAHER

SDG No.	GOAL	2019	2020 (India)	2020 (Global)
	Overall Ranking	101 - 200	3	201 - 300
1	No Poverty	-	2	60
2	Zero Hunger	-	2	101 - 200
3	Good Health and Well Being	46	1	20
4	Quality Education	201 - 300	13	401 - 600
5	Gender Equality	201+	2	101 - 200
6	Clean Water & Sanitation	-	12	101 - 200
7	Affordable & Clean Energy	-	7	101 - 200
8	Decent Work and Economic Growth	-	6	400+
9	Industry, Innovation and Infrastructure	201 - 300	12	400+
10	Reduced Inequalities	101 - 200	7	301 - 400
11	Sustainable Cities and Communities	101 - 200	5	301 - 400
12	Responsible Consumption & Production	16	6	201 - 300
13	Climate Action	-	2	101 - 200
14	Life Below Water	-	-	-
15	Life on Land	-	3	73
16	Peace, Justice and Strong Institutions	91	8	400+
17	Partnership for the Goals	201 - 300	5	201 - 300

Roadmap for attaining the Sustainable Development Goals through Smart Campus initiatives

1. Awareness
2. Advocacy at institution level
3. Implementation at institution level and association with local bodies
4. Monitoring
5. Where do we go from here?

The above listed strategies have already been suggested by Global Taskforce for Regional and local Governments to support and attain the 2030 agenda.

