



# GREEN AUDIT REPORT

Academic Year 2022 - 2025



EARTH



WATER



AIR



LIGHT



SPACE



## SHAH SATNAM JI BOYS' COLLEGE

Sirsa | Haryana



Prepared by



### GREEN MENTORS

Powered by Law of Nature

Special Consultative Status with the  
Economic and Social Council of  
United Nations from 2021

## AUDITOR'S VIEW



EARTH



WATER



AIR



LIGHT



SPACE

### Global Readiness in Ensuring Ecological Neutrality of SSJB College

Shah Satnam Ji Boys College, Sirsa, Haryana is a distinguished institution exemplifying a steadfast commitment to sustainability and environmental stewardship.

As an Accredited Green University, SSJB College has successfully met its natural resource needs—including energy, water, and materials—without compromising the ability of current and future generations to meet their own needs.

Green Mentors, holding special consultative status with the Economic and Social Council (ECOSOC) of the United Nations and a proud Member of the Association for the Advancement of Sustainability in Higher Education (AASHE), is proud to present the Green College Audit Report and Accreditation Certificate to Shah Satnam Ji Boys College, Sirsa, Haryana.

This report is based on comprehensive information provided by SSJB College's Green Auditing Team. It addresses the Five Elements of Nature and minimizes environmental impact through education and the integration of sustainability in teaching-learning practices.

The Green University Auditing and Accreditation process is based on a set of Global Indicators of greening learning spaces set out by UNESCO, which assess Green Learning Spaces across multiple domains: Governance & Academic, Building Design & Landscaping, Water Management Practices, Energy Uses & Saving Practices, Air Quality Level, Health & Hygiene Practices, and Sustainable Resource Utilization. Each indicator is meticulously measured against a set of Global Standards for auditing and accreditation of sustainable learning spaces.

Regarding building design and landscaping, SSJB College strictly adheres to local building regulations, ensuring sustainable and compliant infrastructure. The university employs strategic measures for topsoil preservation, such as aeration and indigenous gardening practices.

Eco-friendly commuting is promoted through on-campus residential facilities and encouraging sustainable transportation options. SSJB College's parking facilities incorporate shaded areas, sustainable paving materials, and energy-efficient lighting. The campus features extensive greenery, including community gardens, parks, and green roofs, supporting local biodiversity.

Efforts to minimize heat exposure are evident in strategically planting over 456 trees and using solar panels and reflective paint on roofs. The campus is also designed according to Universal Design principles, ensuring accessibility for all individuals.





## AUDITOR'S VIEW

SSJB College has implemented comprehensive water management practices to ensure sustainability. Rainwater harvesting systems capture runoff from both roof and non-roof areas, enhancing groundwater recharge and reducing reliance on potable water.

Water-efficient plumbing fixtures and advanced irrigation systems, such as drip and sprinkler irrigation, are employed to maximize water efficiency.

The university treats its wastewater to tertiary standards, making it suitable for non-potable applications, and reuses treated grey water for landscaping and flushing toilets. A water use monitoring system provides real-time data to optimize water management and prevent wastage. These initiatives demonstrate SSJB College's commitment to efficient and sustainable water use.

The university also prioritizes air quality and energy use through various measures. SSJB College maintains a smoke-free campus, maximizes natural lighting, and ensures proper ventilation in all buildings. Classrooms are designed with appropriate occupant density and anthropometric dimensions for comfort and safety.


The use of low-VOC materials for construction and renovation minimizes indoor air pollution. To reduce energy consumption, SSJB College avoids ozone-depleting substances, uses energy-efficient lighting, fans, and appliances, and employs an energy sub-metering system.

The university generates on-site renewable energy with solar panels and utilizes solar water heating systems. Distributed power generation systems enhance energy security and promote clean energy use, supporting SSJB College's sustainability goals.

Green Mentors is proud to declare that Shah Satnam Ji Boys College has achieved **357** out of **500** Points, earning a Gold Ranking in the Global Green College Accreditation Standards for the Academic Year 2022-2025.

This prestigious recognition highlights SSJB College's holistic and comprehensive approach to sustainability, setting a benchmark for other institutions. We are confident that Shah Satnam Ji Boys College will emerge as a green engine for the new paradigm of the "green economy."

SSJB College's continued efforts in sustainability will significantly contribute to the planet's overall sustainability, ensuring a brighter, greener future for all.

  
29-05-2024

Dr. Virendra Rawat

Author of Green School Accreditation Standards

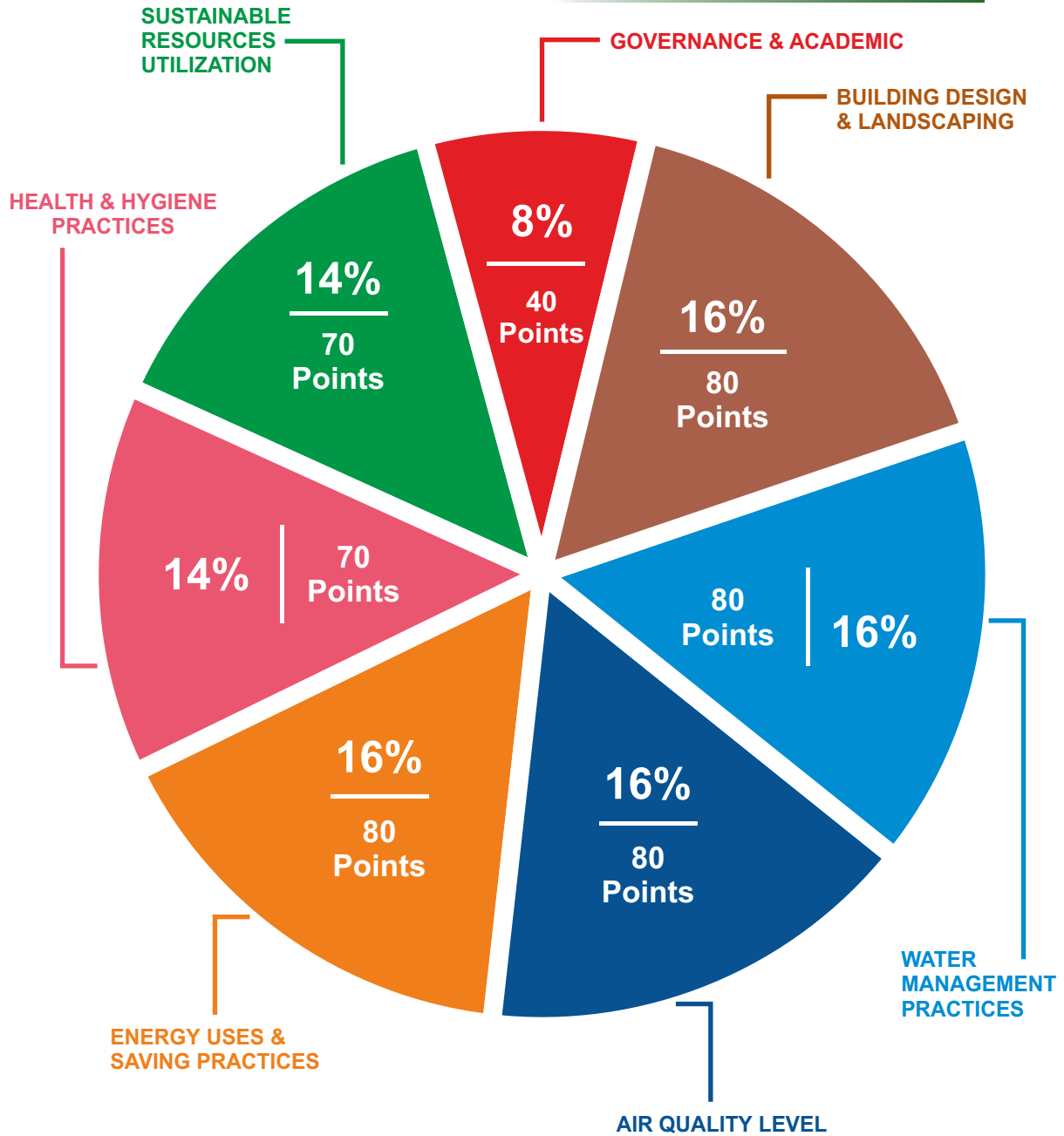
Aligned with UNESCO's Green School Quality Standards

**GOOD FOR PUPIL & GOOD FOR PLANET**

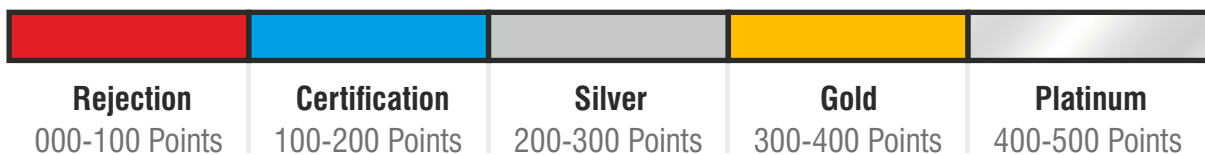




## Sustainability Weightage of Assessment Areas



### Certification Level





**CERTIFICATE**

**ACCREDITATION**



**ACCREDITED GREEN COLLEGE**  
**GOLD**  
**2022-2025**

**CERTIFICATE**

 EARTH  
 WATER  
 AIR  
 LIGHT  
 SPACE

 EDUCATION  
 INNOVATION  
 INDUSTRY  
 SPACE  
 TRANSPORT

This is to certify that

**SHAH SATNAM JI BOYS' COLLEGE**  
Sirsa, Haryana

has successfully achieved the Accreditation Standards designed and defined by Green Mentors for Global Readiness in Ensuring Ecological Neutrality (GREEN) associated with Teaching and Learning practices, and now is Accredited as a

**GREEN COLLEGE**

in Gold Ranking.

*Virendra Rawat*  
24-05-2024  
**Virendra Rawat**  
Director, Green Mentors

**GREEN MENTORS**  
Powered By Law of Habits

Special Consultative Status with the Economic and Social Council of United Nations from 2021

**GREEN MENTORS**  
New York | USA

In Association




GM/GA/2024/047/G1

This Certificate is issued on 29<sup>th</sup> May, 2024 & Valid till the Academic Year 2025





## ■ Brief Introduction

Established in January 2000, Shah Satnam Ji Boys College was founded with the vision of enhancing academic performance and fostering community development in the educationally underserved region of Haryana. Situated on Begu Road in Sirsa, just 4 km from both the railway station and bus stand, the college offers convenient accessibility in a serene environment near Shah Mastana Ji Dham.

The mission of the college is to provide high-quality, inclusive education that is accessible to all. With a strong emphasis on equipping students with the knowledge, skills, and moral values needed to become proactive, responsible, and innovative citizens, the institution strives to shape individuals who contribute positively both within and outside their communities.

Shah Satnam Ji Boys College offers a comprehensive range of undergraduate and postgraduate programs across disciplines such as Arts, Science, Commerce, Mass Communication, Geography, English, Mathematics, Public Administration, and Physical Education. Affiliated with Chaudhary Devi Lal University and recognized by the Government of Haryana, the college serves as a beacon of opportunity, delivering top-quality education and moral responsibility.

Spread over 10 acres of lush, green, smoke-free, and pollution-free grounds, the campus provides an ideal learning environment. The college boasts spacious classrooms, state-of-the-art laboratories, and a well-stocked library offering books, periodicals, magazines, and digital resources that are regularly updated to keep pace with the latest research.

Physical and mental well-being are promoted through the college's extensive sports infrastructure, which includes courts for handball, basketball, and badminton, as well as a gymnasium and facilities for boxing and wrestling. An auditorium with audio-visual equipment and a well-furnished conference room support academic and extracurricular activities.

The college also places great emphasis on professional development for both staff and students. Faculty members are provided with a supportive environment for growth, while students are encouraged to foster creativity, adaptability, and technological proficiency through access to digital resources and regular internet connectivity.

Shah Satnam Ji Boys College is committed to producing students who excel academically, athletically, and morally. With a focus on strong ethical values, the college prepares its graduates to not only succeed in their professional endeavors but also to make meaningful contributions to society.







## Academic Programs

Certificate	Diploma	Under Graduate	Post Graduate	Research / Ph.D.
Certificate in French	Diploma in Physical Education Diploma in French	Bachelor of Arts Bachelor of Commerce Bachelor of Computer Application Bachelor of Business Administration Bachelor of Journalism & Mass Communication Bachelor of Science (Non-Medical) Bachelor of Science (Computer Science) Bachelor in Physical Education	Master of Arts Journalism & Mass Communication Master of Arts in English Master of Arts in Public Administration Master of Science in Geography Master of Commerce	Gujarati





## Green Academic Team

Sr. No.	Name	Position
1	Ms.Kiran Bala	Vice-Principal
2	Dr.ChanchalRani	AssociateProf.Comp.Sci.
3	Dr.RishuTomar	AssociateProf.Geography
4	Ms.Sunita	Asstt. Prof. Home Science
5	Ms.Anita Rani	Asstt. Prof. Physical Education
6	Ms.Ruby	Asstt. Prof.Geography
7	Ms.Renu Dara	Asstt.Prof .Mass Com.
8	Ms.Anupama	
9	Ms.Neha	Asstt.Prof. Commerce
10	Ms.TulsiRani	
11	Ms.Leenu	
12	Ms.Ripna	
13	Ms.Yogita	
14	Ms.SaritaRani	
15	Ms.Kuldeep Kaur	
16	Ms.Renu	
17	Ms.Anju Rani	
18	Ms.Ishu	
19	Ms.PoojaTaneja	Asstt.Prof. Mathematics
20	Ms.Raman Rani	
21	Ms.Suman Rani	Asstt.Prof. Psychology
22	Ms.Payal Rani	Asstt.Prof.Chemistry
23	Ms.Shifali	
24	Ms.Veena Navjot	Asstt.Prof. Comp.Sci.
25	Ms.Neha Arora	
26	Ms.Nisha Phutela	
27	Dr.Divya	Asstt.Prof.Punjabi
28	Ms.Meenakshi	







## ■ Green Academic Team

Sr. No.	Name	Position
29	Ms.Komal	Asstt.Prof.Punjabi
30	Ms.Rupa	
31	Ms.Priyanka	
32	Ms.Pooja Monga	Asstt.Prof.Economics
33	Dr. Monika	Asstt.Prof.English
34	Ms.GurdeepKaur	
35	Ms.Muskan Bajaj	
36	Ms.Dheeraj Pal Kaur	
37	Ms.Kamlesh	
38	Ms .PoonamDhamija	Asstt.Prof.Hindi
39	Ms.Shalu	
40	Ms.Suman Rani	
41	Ms.Madhu Bala	Asstt.Prof.Mathematics
42	Ms.Avnee	
43	Ms.Shilpa Rani	
44	Ms. Naresh Rani	Asstt.Prof.Phy.Edu.
45	Ms.Raman	
46	Dr.RekhaMehta	Asstt.Prof.Physics
47	Ms.Bhavya	
48	Ms.Meena Rani	Asstt.Prof.Psychology
49	Dr.KantaRani	Asstt.Prof.Pub.Ad.
50	Ms.GeetaRani	
51	Ms.Jasbir Kaur	
52	Ms.Suman	
53	Ms.Tajinder Kaur	





## ■ Green Non-Academic Team

Sr. No.	Name	Position
1	Ms.Varsha	Accountant
2	Ms.Madhu	Attend.
3	Ms.JaswinderKaur	
4	Ms.Preetpal Kaur	
5	Ms.Charanjeet Kaur	
6	Ms.SudeshRani	
7	Ms.BalvirKaur	
8	Ms.Jyoti	Receptionist
9	Ms.AnitaRani	Office Assittance
10	Ms.RaminderKaur	
11	Ms.Sonam	
12	Ms.SumanRani	Office Superintendent
13	Ms.Sushama	Clerk
14	Ms.Preeti	Assistant Lab
15	Ms.JasbirKaur	Assistant Librarian
16	Ms.Sarabjit Kaur	
17	Ms.ManishaRani	Comp.Librarian Assistant
18	Ms.Manish Kaswan	Cultural Co-ordinator
19	Ms.Ekta	
20	Ms.HardeepKaur	Geo. Librarian Assistant
21	Ms.RajeshRani	Hom.Sci. Assistant
22	Ms.GurmeetKaur	Lab Assistant
23	Ms.Ritu Nagpal	Skating Coach
24	Sr.JagtarSingh	Security Guard
25	Mr.Narinder Kumar	
26	Mr.Pawan	Driver
27	Mr.Parmeshwar	
28	Mr.Virpal Singh	





## ■ Green Non-Academic Team

Sr. No.	Name	Position
29	Sr.BaljeetSingh	Driver
30	Mr.Joginder Kumar	
31	Mr.Gurtej Singh	
32	Ms.Suman	Gardner
33	Mr.Sultan	Helper
34	Mr.Balveer Singh	
35	Mr.Ramesh Kumar	
36	Mr.Karambir Singh	
37	Mr.Jagdeesh Prasad Dwiwedi	

## Number of Students

Certificate	Diploma	Under Graduate	Post Graduate	Research / Ph.D.
Nil	99	770	91	Nil



# GOVERNANCE & ACADEMIC



A Green University is an institution of higher education that prioritizes sustainability and environmental stewardship in its operations, curriculum, and community engagement. As such, academic practices in a Green University are centered around sustainable principles and procedures.

**Sustainable Curriculum:** A Green University may offer programs focusing on environmental sustainability, such as Environmental Science, Sustainable Development, Green Energy, and more.

**Green Research:** A Green University may prioritize research on environmental sustainability, climate change, and green technologies. Researchers at Green University may work on projects that seek to find innovative solutions to environmental challenges, such as developing renewable energy sources or reducing carbon emissions.

**Sustainable Campus Operations:** A Green University may prioritize sustainable campus operations by implementing sustainable practices such as energy-efficient buildings, renewable energy sources, sustainable transportation, waste reduction and recycling programs, and more.

**Community Engagement:** A Green University may engage with the local community to promote sustainability and environmental stewardship.

**Sustainable Procurement:** A Green University may prioritize purchasing products and services that are environmentally sustainable, such as environmentally-friendly cleaning products, recycled paper, and locally sourced food.

**Sustainable Policies:** A Green University may prioritize implementing sustainable policies that align with its mission and values.





## GOVERNANCE & ACADEMIC



### 1. GOVERNANCE

#### Green Governance

Green governance of the University refers to the policies, practices, and structures in place to ensure the institution operates environmentally and sustainably. Here are some key elements of green governance in universities:

**Environmental Policies:** A university should have a clear set of environmental guidelines that outline its commitment to sustainability and environmental stewardship.

These policies should address energy and water conservation, waste reduction and recycling, sustainable procurement, and sustainable transportation.

**Sustainability Committees:** A university should establish a sustainability committee or task force responsible for implementing and overseeing sustainability initiatives.

This committee should include representatives from various departments, faculty, and students to ensure sustainability is integrated throughout the institution.

**Green Buildings:** Universities should adopt green building practices to reduce the environmental impact of their facilities.

This includes designing and constructing energy-efficient buildings, using sustainable materials, and promoting healthy indoor environments.

**Sustainable Transportation:** Universities should promote sustainable transportation options such as biking, walking, carpooling, and public transportation.

This can be achieved through infrastructure improvements, incentives for sustainable commuting, and partnerships with local transportation providers.

**Curriculum Integration:** Universities should integrate sustainability into their curriculum to ensure that students are equipped with the knowledge and skills needed to address environmental challenges.

This can be achieved by offering sustainability-focused courses, interdisciplinary programs, and experiential learning opportunities.

**Community Engagement:** Universities should engage with local communities to promote sustainability and environmental stewardship.

This can be achieved through partnerships with local organizations, sustainability events, and outreach programs.

Green governance of the University involves integrating sustainability into all aspects of the institution, from policies and practices to facilities and curriculum. This approach promotes environmental stewardship and sustainability and is a model for other higher education institutions.



## GOVERNANCE & ACADEMIC



### 1. GOVERNANCE



Shah Satnam Ji Boys' College (SSJB College) exhibits strong governance driven by state statutes and is dedicated to serving all stakeholders, including the Environment. The College's governing body ensures transparency in decision-making, accountability in performance, and the effective use of human potential.

The governance structure includes diverse members representing different aspects of the College community, ensuring a holistic approach to governance that prioritizes sustainable practices.

#### ■ About Governing Body

At Shah Satnam Ji Boys College, we believe that education is the cornerstone of both individual and societal development. Our aim is to foster a dynamic and nurturing learning environment where students can grow holistically, think critically, and engage deeply with academic challenges. We strive to equip our students with the values, knowledge, and skills they need to excel in their respective fields and make meaningful contributions to society. Along with rigorous academics, we encourage participation in extracurricular activities, sports, and community service, helping students build resilience, leadership, and confidence to face the challenges of a globalized world.

The Governing Body of Shah Satnam Ji Boys College plays a vital role in shaping the policies and overseeing the governance of the institution. Comprising 06 members, nine of whom are elected from the Society, the Governing Body ensures that the college functions smoothly and adheres to its mission. Additionally, the body includes one representative from the alumni and the Director of the Institute.

The Governing Body may also invite individuals from government or academic institutions to serve, seeking necessary permissions from their organizations when needed. Members of the Governing Body serve terms with one-third relinquishing office annually, replaced either through elections or invitation.

The highest academic authority within the institution is the Senate, which oversees all decisions related to academics, including curriculum development, approval of syllabi, and the awarding of degrees and diplomas. The Academic Senate governs the academic program and consists of all faculty members, along with four external experts nominated by the Governing Body. This ensures a well-rounded, expert-driven approach to maintaining academic excellence and innovation at Shah Satnam Ji Boys College.





## GOVERNANCE & ACADEMIC



### 2. LEADERSHIP

Sustainable university leadership incorporates sustainability into the institution's operations, policies, and culture.

**Developing a Sustainability Vision:** University leaders should establish a clear and compelling vision that outlines the institution's commitment to environmental, social, and economic sustainability.

The vision should be communicated to all stakeholders, including students, faculty, staff, and community members.

**Establishing Sustainability Goals:** University leaders should develop specific, measurable, and time-bound goals aligning with the institution's vision. These goals should be integrated into the University's strategic plan and monitored regularly to track progress.

**Embedding Sustainability Into the Curriculum:** University leaders should work to integrate sustainability into the curriculum across all disciplines. This can be achieved by offering sustainability-focused courses, incorporating sustainability into existing courses, and promoting interdisciplinary sustainability programs.

**Promoting Sustainable Operations:** University leaders should implement sustainable practices in university operations, including energy and water conservation, waste reduction and recycling, sustainable transportation, and green building practices.

**Fostering a Culture of Sustainability:** University leaders should promote a culture of sustainability throughout the institution by engaging stakeholders and encouraging participation in sustainability initiatives. This can be achieved through employee and student sustainability training programs, sustainability awards, and sustainability outreach programs.

**Collaborating with Stakeholders:** University leaders should work collaboratively with stakeholders, including students, faculty, staff, alumni, and community members, to identify sustainability priorities and develop strategies to achieve sustainability goals. Sustainable leadership in universities requires a commitment to sustainability across all institution levels. By incorporating sustainability into the institution's operations, policies, and culture, university leaders can promote a more sustainable future and inspire the next generation of sustainability leaders.





**GOVERNANCE & ACADEMIC**



**2. LEADERSHIP**

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Under the leadership of Dr. Dilawar Singh, SSJB College strives to embody responsible education, nurturing successful leaders committed to sustainability.

Dr. Monga 's extensive experience in teaching and research, along with his dedication to building a responsible educational institution, underscores the College's commitment to sustainability and excellence in education.

His leadership ensures that the College remains a beacon of quality and responsible education, fostering an environment where sustainability is integrated into every aspect of academic life.



**Dr. Dilawar Singh**  
Principal

Dr. Dilawar Singh has been the esteemed Principal of Shah Satnam Ji Boys' College, Sirsa, for the past 16 years. Throughout his tenure, he has actively contributed to both undergraduate and postgraduate teaching, demonstrating a strong commitment to academic excellence. He is also closely associated with a social welfare organization in Haryana, highlighting his dedication to community service and development.

In addition to his teaching responsibilities, Dr. Singh has served as a national and state-level trainer, coordinator, and evaluator for various programs, showcasing his leadership in the field of education. He has attended more than 10 national and international conferences, workshops, and seminars, enriching his expertise and contributing to academic discussions on a wide range of topics.







## GOVERNANCE & ACADEMIC

Dr. Singh's research interests span critical issues in media, communication, and social dynamics. His notable research work includes:

- New Media Crime Engineering & Cost of Technology Innovation
- The International Ideology in Media Discourse
- Research in Mass Communication Discipline: Status, Problems, and Opportunities
- Use of Social Media Among Youth
- The Political Economy of Social Media and Capitalistic Control: Myth or Reality
- Source, Characteristics, and Current Trends of Mass Communication
- Mass Media and Its Communication Perspectives
- Vartman Pridrishya Mein Haryana Ke Manoranjan Madhyamo Ke Parti Samajik Pratikriya
- Public Relations: The Role of Women
- In addition to his research, Dr. Singh is also an accomplished author. He has published a book titled Digital Media, Culture, and Society and contributed a chapter on "Lockdown and Social Media" in the edited volume Social Media: Opportunities and Challenges.

Dr. Dilawar Singh continues to be a driving force in both academia and social welfare, fostering an environment of intellectual growth, leadership, and community involvement at Shah Satnam Ji Boys' College.





**GOVERNANCE & ACADEMIC**

**Organization Chart**





## GOVERNANCE & ACADEMIC



### 3. Sustainability Commitment

The sustainability commitment of a university refers to its dedication to integrating sustainability into all aspects of its operations, policies, and culture. A university's sustainability commitment involves a comprehensive approach to sustainability that incorporates environmental, social, and economic factors i.e.

**Environmental Sustainability:** A university's commitment to ecological sustainability involves reducing its environmental impact through sustainable practices in energy and water conservation, waste reduction and recycling, sustainable transportation, and green building practices.

**Social Sustainability:** A university's commitment to social sustainability involves promoting social justice, equity, and inclusivity within the institution and in the broader community.

This can be achieved through diversity and inclusion initiatives, community engagement programs, and the promotion of social responsibility and ethical behavior.

**Economic Sustainability:** A university's commitment to economic sustainability involves balancing its financial needs with its sustainability goals.

This can be achieved through responsible financial management, sustainable procurement practices, and promotion of entrepreneurship and innovation.

**Curriculum and Research:** A university's commitment to sustainability involves incorporating sustainability into the curriculum across all disciplines and promoting sustainability research.

This can be achieved by offering sustainability-focused courses, incorporating sustainability into existing systems, and promoting interdisciplinary sustainability programs.

**Stakeholder Engagement:** A university's commitment to sustainability involves engaging stakeholders, including students, faculty, staff, alumni, and community members, in sustainability initiatives.

This can be achieved through employee and student sustainability training programs, sustainability awards, and sustainability outreach programs.

Overall, a university's sustainability commitment involves a comprehensive approach that integrates environmental, social, and economic factors into all aspects of the institution's operations, policies, and culture.

By promoting sustainability within the institution and in the broader community, universities can inspire the next generation of sustainability leaders and contribute to a more sustainable future.





**GOVERNANCE & ACADEMIC**



**3. Sustainability Commitment**

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SSJB College 's commitment to sustainability is evident in its vision and mission. The College embraces its responsibility to confront climate change and sustainability challenges, aiming to create a campus that contributes positively to the Environment and community's well-being.

SSJB College focuses on providing high-quality scientific education to tribal students, promoting intellectual, moral, and social development. The College's initiatives, such as organic composting and energy-efficient practices, highlight its dedication to reducing environmental impact and promoting sustainable living.







## GOVERNANCE & ACADEMIC



### 4. Innovative Practices

Innovation practices in universities refer to the strategies and approaches universities use to promote and support innovation and entrepreneurship. Here are some examples of innovative practices in universities:

**Incubators and Accelerators:** Many universities have established incubators and accelerators to provide support and resources to startups and entrepreneurs.

These programs often offer mentoring, funding, networking opportunities, and specialized equipment and facilities access.

**Entrepreneurship Courses and Programs:** Universities can offer classes and programs that teach students the skills and knowledge needed to launch and run a successful startup.

These programs may cover business planning, marketing, and finance topics.

**Research and Development Partnerships:** Universities can partner with businesses and organizations to conduct research and development, leading to new products, services, and technologies. These partnerships can benefit both the University and the partner, creating opportunities for innovation and commercialization.

**Intellectual Property and Commercialization Support:** Universities can provide support and resources for protecting and commercializing intellectual property. This can include patent filing assistance, licensing services, and startup incubation and acceleration.

**Collaborative Innovation Spaces:** Universities can establish collaborative spaces that bring together students, faculty, researchers, and industry partners to work on innovative projects.

These spaces can facilitate cross-disciplinary collaboration and knowledge sharing.

**Innovation Competitions and Awards:** Universities can organize innovation competitions and prizes to recognize and incentivize creative thinking and problem-solving.

These competitions encourage students to develop new solutions to real-world problems and promote a culture of innovation on campus.

University innovation practices involve creating an environment that fosters creativity, encourages risk-taking, and supports entrepreneurship. By promoting innovation on campus, universities can help drive economic growth and development while providing students with the skills and experience needed to succeed in a rapidly changing world.





**GOVERNANCE & ACADEMIC**



**4. Innovative Practices**

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Innovation at SSJB College is driven by the creativity and dedication of its faculty and students. The College encourages innovative learning opportunities through collaborations with researchers, innovators, and entrepreneurs. This approach ensures that students are exposed to cutting-edge research and practical applications of scientific knowledge.

By integrating innovation into postgraduate and research programs, SSJB College fosters an environment where creativity thrives, contributing to sustainable solutions and advancements in scientific education.

Cumulative Score	<b>30/40</b>
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# BUILDING DESIGN & LANDSCAPING



Building design and landscaping are critical components of a Green University, as they are vital in promoting sustainability and environmental stewardship. Here are some essential considerations for building design and landscaping in a Green University:

**Sustainable Building Design:** A Green University should prioritize sustainable building design incorporating energy-efficient systems and materials, green roofs and walls, natural lighting and ventilation, and water conservation features.

**Renewable Energy Sources:** A Green University should consider incorporating renewable energy sources into its buildings, such as solar panels, wind turbines, or geothermal systems.

**Sustainable Landscaping:** A Green University should prioritize sustainable landscaping practices that promote biodiversity, soil health, and water conservation.

**Sustainable Water Management:** A Green University should consider implementing sustainable water management practices, such as rainwater harvesting, grey water recycling, and low-flow fixtures. These practices can help conserve water and reduce the University's impact on the local water supply.

**Green Transportation:** A Green University should prioritize sustainable transportation options, such as bike paths, pedestrian walkways, and electric vehicle charging stations.

**Sustainable Materials:** A Green University should prioritize using sustainable materials in construction and landscaping, such as reclaimed wood, recycled materials, and sustainably sourced materials.

The University can reduce its environmental impact, promote sustainable practices, and inspire the next generation of environmentally-conscious leaders.



## 1. Local Building Regulations

Building laws and regulations in India vary from state to state and are subject to changes over time. These regulations are typically enforced at the local or state level, and they cover a wide range of aspects related to construction, including safety, zoning, environmental concerns, and more. For universities or educational institutions in India, here are some key considerations and regulations to keep in mind:

**Local Building Codes:** Universities in India must adhere to local building codes and regulations. These codes specify requirements for structural integrity, fire safety, electrical systems, plumbing, and other aspects of construction. Local municipal bodies or development authorities often enforce these codes.

**Zoning Laws:** Zoning regulations determine how land in a particular area can be used. Educational institutions, including universities, are allowed in specific zones. It's important for universities to ensure that their campus location complies with local zoning laws.

**Environmental Regulations:** Building and construction activities can have environmental impacts. Universities need to be aware of and comply with environmental regulations related to waste disposal, energy efficiency, and water conservation.

**Fire Safety Regulations:** Fire safety is a critical aspect of building construction. Universities must adhere to fire safety regulations, which may include the installation of fire alarms, sprinkler systems, and fire exits.

**Accessibility and Disability Laws:** It's important for universities to ensure that their buildings are accessible to individuals with disabilities. Compliance with accessibility standards, such as the Rights of Persons with Disabilities Act, is crucial.

**Heritage and Conservation Laws:** If a university is located in an area with historical or cultural significance, there are heritage conservation laws that restrict modifications to existing buildings or the construction of new structures.

**Occupancy Certificates:** Before a university building can be occupied, it typically needs to obtain an occupancy certificate from the local municipal authority. This certificate confirms that the building meets all necessary safety and regulatory requirements.





### Local Building Regulations

**Land Use Planning:** Universities need to submit a master plan for their campus, outlining the land use and development plans. This plan may need approval from local planning authorities.

**Local Authority Approvals:** Before starting construction, universities need to obtain approvals and permits from local development authorities or municipal corporations. These approvals may involve scrutiny of building plans and compliance with local regulations.

**Energy Efficiency Standards:** Building regulations in India increasingly emphasize energy efficiency and sustainability. Universities need to incorporate energy-efficient features into their buildings and follow local green building standards like LEED (Leadership in Energy and Environmental Design).

To ensure compliance with local building laws and regulations, universities need to work closely with local authorities, hire qualified architects and engineers, and consult legal experts as needed. It's also important to stay updated on any changes in building codes and regulations at the local or state level, as these can evolve over time.





**BUILDING DESIGN & LANDSCAPING**

**From** Fire Station Officer  
SIRSA

**To** M/s SHAH SATNAM JI BOYS PG COLLEGE  
SHAH MASTANA JI DHAM DERA SACHA SAUDA SIRSA HARYANA  
Memo No. FS/2023/31 dated : 10/08/2023

**Subject :** Fire Safety Certificate Under 15 mtrs. from the fire safety point of view for Group B-Educational Building at SHAH MASTANA JI DHAM DERA SACHA SAUDA SIRSA HARYANA of SHAH SATNAM JI BOYS PG COLLEGE :


Reference your letter no. 171022323000142 dated 13/07/2023 on the subject cited above.

Tower Name	Floor Detail	Height	Ground Coverage
SHAH SATNAM JI BOYS PG COLLEGE	G+01 FLOOR	8.23 MTR	2584 SQM
Basement Level	Basement Area	Basement Remarks	
NA	NA	NA	

- All the fire fighting equipments shall be maintained in perfect working condition all the time and any lapse rendering non-functional of fire safety measures, management shall be responsible.
- The open set back area is not checked at our end as it shall be checked by concerned building authority/department.
- If any lapse or non functioning of fire system will be the sole responsibility of the owner/occupier.
- All the means of escape shall be kept free of all the type of obstruction all the time.
- All the employees shall be acquainted with the use and maintenance of all fire equipments and method of smooth and speedy safe evacuation of occupants in case of emergency.
- Fire Safety Certificate granted subject to condition that there is no violation in sanctioned building plan by virtue of which fire fighting scheme was approved.
- This Fire Safety Certificate can not be treated in any case for regularizations of unauthorized construction unauthorized use of land if any.
- The owner/occupier shall strictly follow the other applicable rules/by laws laid down regarding fire safety system. If you fail to comply with any of the above terms & conditions, This fire NOC will be deemed cancelled and you will be liable to be punish as per Section 30,31 & 47 of Fire & Emergency Services Act- 2022.
- If the infringements of Byelaws remains un-noticed the Authority reserves the right to amend the Fire Safety Certificate as and when any such infringements comes to notice after giving an opportunity of being heard and the Authority shall stand indemnified against any claim on this account.
- The owner or occupier of the building shall give a self-declaration certificate annually to the effect that the fire fighting system installed in his building is working in good condition and there is no addition/alteration in the building. The Fire Officer may randomly check such building. In case there is any addition/alteration beyond permissible limits under the Haryana Building Code, 2017, the fire safety certificate shall cease to exist and the owner shall apply for approval of revised Fire Fighting Scheme as per the provisions of section 18.

**The above Fire Safety Certificate is valid for only Three year from the date of issue of this letter Applying renewal of the same well in time shall be the responsibility of owner/occupier.**

**Remarks:- APPLICATION UPDATED**



Fire Station Officer,  
SIRSA  
Exercising the power of Director, Fire Services, Haryana

Digitally signed by Ramesh Kumar  
Date: 2023.08.10 11:50:58 -07:00  
Reason: Digital Verification





## 2. Top-Soil Preservation

Topsoil erosion can occur due to wind, rain, or human activities like excavation and construction. When topsoil erodes, it can cause soil degradation and reduce the soil's ability to support plant growth. Therefore, preserving topsoil helps to prevent erosion and maintain soil health.

Soil conservation is the prevention of loss of the topmost layer of the earth from erosion or the prevention of reduced fertility caused by over usage, acidification, salinization, or other chemical soil contamination.

Topsoil has the highest concentration of organic matter and nutrients. It is also the most fertile layer of soil and is crucial for plant growth. Therefore, preserving topsoil helps to conserve the soil's fertility and ensures that it can support plant growth in the future.

Topsoil acts as a sponge, absorbing water and allowing it to infiltrate the soil. This helps to reduce runoff and erosion, and it also helps to recharge groundwater supplies. In addition, preserving topsoil helps to maintain soil moisture levels and ensure that water is available for plant growth.

The topsoil layer contains diverse microorganisms, including bacteria, fungi, and other soil organisms. These microorganisms play an essential role in nutrient cycling and soil health. Preserving topsoil helps to maintain soil biodiversity, which is necessary for ecosystem health.

Preserving topsoil is an essential aspect of sustainable landscaping. It helps to reduce the need for chemical fertilizers and pesticides, which can harm the environment and human health. The University can create a more sustainable and environmentally friendly landscape by preserving topsoil.





## 2. Top-Soil Preservation



SSJB College actively preserves topsoil, the most fertile soil layer capable of supporting vegetation. The College employs methods such as regular aeration, indigenous gardening, building wind barriers, mulching, and placing stepping stones to protect the topsoil from erosion and chemical contamination, maintain soil fertility, and support plant growth.

- Cricket ground is converted into natural green grass ground
- 110 Sqm butterfly park with appx 1,200 shrubs
- 68 numbers of small to large fruit plants planted (wide variety)
- Developed 120 SQM of Miyawaki forest, different height plants with high density





### 3. Eco-friendly Commuting Practices

Eco-friendly commuting practices in universities involve promoting sustainable transportation options that reduce the environmental impact of commuting to and from campus, including...

**Public Transportation:** University should encourage students and employees to use public transport by providing information on local transit options, offering transit subsidies, and partnering with local transit agencies to provide discounted fares.

**Active Transportation:** University should promote active transportation options such as walking, biking, and skateboarding by providing bike racks, shower facilities, and safe pedestrian and bike routes.

**Carpooling and Vanpooling:** University should encourage carpooling and vanpooling by providing carpool matching services, preferred parking for carpool vehicles, and incentives such as discounted parking fees.

**Electric and Hybrid Vehicles:** Universities can promote using electric and hybrid cars by providing charging stations and offering incentives such as preferred parking or discounted parking fees.

**Telecommuting and Flexible Work Arrangements:** Universities can offer telecommuting and flexible work arrangements to reduce the need for employees to commute to campus.

**Green Transportation Events and Campaigns:** Universities can organize events and campaigns to promote eco-friendly commuting options, such as bike-to-work days, car-free days, and sustainable transportation fairs.

Universities' eco-friendly commuting practices involve sustainable transportation options that reduce the environmental impact of commuting to and from campus.

By promoting sustainable transportation, universities can help reduce traffic congestion, improve air quality, and contribute to a more sustainable future.



### 3. Eco-friendly Commuting Practices

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SSJB College promotes eco-friendly commuting among its students and staff, encouraging walking, cycling, and public transport.

The College also provides residential facilities for its faculty and non-teaching staff to minimize the environmental impact of automobile use. This initiative reduces the campus's carbon footprint and promotes sustainable transportation habits.

	Walking	Bicycle	Motorcycle	Car	College Bus	Transport	Total
Students	75	10	70 (e-bike 50)	0	0	805	960
Teachers	3	1	29 (e-bike 3)	4	0	10	47
Non-Teaching Staff	2	1	4 e-vehicle	1	0	13	21



#### 4. Sustainable Parking Facility

Sustainable parking facilities in universities involve designing and operating parking structures to minimize their environmental impact and maximize their sustainability benefits. Here are some examples of sustainable parking facilities in universities:

**Green Roofs and Walls:** Universities can incorporate green ceilings and walls into their parking structures, which can help reduce the heat island effect, improve air quality, and provide habitat for wildlife.

**Electric Vehicle Charging Stations:** Universities can install electric vehicle charging stations in their parking structures to encourage the use of electric vehicles and reduce greenhouse gas emissions.

**Bike storage and amenities:** Universities can provide bike storage and amenities such as showers, lockers, and repair stations in their parking structures to encourage active transportation and reduce the use of cars.

**Sustainable Construction Materials:** Universities can use sustainable construction materials such as recycled content concrete, low VOC paints and coatings, and locally-sourced materials to reduce the environmental impact of their parking structures.

**Solar Panels:** Universities can install solar panels on the roofs of their parking structures to generate renewable energy and reduce their carbon footprint.

**Stormwater Management:** Universities can incorporate stormwater control features such as rain gardens, bioswales, and permeable paving into their parking structures to reduce stormwater runoff and improve water quality.

Sustainable parking facilities in universities involve designing and operating parking structures to minimize their environmental impact and maximize their sustainability benefits.

By incorporating sustainable features into their parking structures, universities can reduce their carbon footprint, promote active transportation, and contribute to a more sustainable future.





**4. Sustainable Parking Facility**

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SSJB College offers sustainable, tree-shaded parking spaces with sustainable paving materials, energy-efficient or natural lighting, and improved pedestrian walkways. The campus has dedicated parking spaces for buses, cars, motorcycles, and bicycles, supporting eco-friendly commuting practices.

**Parking capacity in the campus**

Buses	Cars	Motorcycles	Bicycles
15	10	150	200







## 5. Greenery and Biodiversity on Campus

Greenery in universities involves incorporating plants and other natural elements into the campus environment to create a more sustainable and livable space. Biodiversity in universities consists in promoting and preserving various plant and animal species within the campus environment.

**Green Roofs and Walls:** Universities can install green ceilings and walls on their buildings to provide insulation, reduce stormwater runoff, improve air quality, and create habitats for wildlife.

**Trees and Shrubs:** Universities can plant trees and shrubs throughout their campuses to provide shade, improve air quality, and reduce the heat island effect.

**Rain Gardens and Bioswales:** Universities can incorporate rain gardens and bioswales into their landscapes to manage stormwater runoff and improve water quality.

**Urban Agriculture:** Universities can establish urban agriculture programs that provide fresh produce for campus dining services and engage students in sustainable food systems.

**Native Plant Gardens:** Universities can establish gardens that feature native plant species, which support local ecosystems and promote biodiversity.

**Wildlife Habitat Preservation:** Universities can preserve natural areas on campus that serve as habitats for local wildlife, such as wetlands, forests, and meadows...

**Campus Sustainability Plans:** Universities can include biodiversity initiatives in their campus sustainability plans, setting targets for biodiversity preservation and establishing monitoring programs to track progress.

**Education and Awareness:** Universities can educate their students, faculty, and staff about the importance of biodiversity and promote awareness of local ecosystems and wildlife.

Greenery in universities involves incorporating natural elements into the campus environment to create a more sustainable, livable, and biodiverse space. By promoting vegetation on campus, universities can contribute to a healthier and more sustainable future for their communities and the planet. In contrast, by supporting biodiversity on campus, universities can contribute to a healthier and more sustainable future for their communities and the earth.

**BUILDING DESIGN & LANDSCAPING**



**5. Greenery in Campus**

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The campus has community gardens, parks, meadows, green roofs, playing fields, and wetlands. This biodiversity supports well-being and educational outcomes, providing food, shelter, and essential habitats for wildlife. Interaction with greenery also improves human stress reduction, emotional states, and cognitive function.

Total Area of the college campus: **43072.31 Sqm.**

**Total Area of the campus**

01	Building foot print	3956.51 m <sup>2</sup>
02	Playground area	4805.38 m <sup>2</sup>
03	Vegetated space	15280.42 m <sup>2</sup>
	A. Turf area	3277.22 m <sup>2</sup>
	B. Area with native species	6893.73 m <sup>2</sup>
	C. Area with drought tolerant species	3338.47 m <sup>2</sup>
	D. Other Species area	3338.47 m <sup>2</sup>
04	Non-roof impervious area	17901.72 m <sup>2</sup>
05	Water body	1128.27 m <sup>2</sup>



**BUILDING DESIGN & LANDSCAPING**



**5. Greenery in Campus**

Sr. No.	Plant/ Tree categories	Name of Plant/Tree	Total No. of plant/ Tree
1	Tree	Neem	23
2	Tree	Jamun	24
3	Tree	Badh	6
4	Tree	sahtut	1
5	Tree	Pipal	1
6	Tree	Bari	220
7	Tree	Verma Dak	7
8	Tree	Baken	6
9	Plant	Kaneer	18
10	Tree	Kanher	1
11	Tree	Stonia	2
12	Tree	Fish Pam Tree	1
13	Plant	Guddal	9
14	Plant	Tikona	2
15	Tree	Estonia	2
16	Tree	Sisam	3
17	Tree	Lasuda	4
18	Tree	Babul	2
19	Plant	Calendra	2
20	Tree	Neembu	9
21	Tree	Barhagingla	1
22	Tree	ChristTree	3
23	Tree	Panda	16
24	Tree	Fycus	24

**BUILDING DESIGN & LANDSCAPING**



**5. Greenery in Campus**

Sr. No.	Plant/ Tree categories	Name of Plant/Tree	Total No. of plant/ Tree
25	Tree	Ticona	3
26	Ball	Begun	5
27	Tree	Bottle Pam	17
28	Tree	English Gudhel	3
29	Tree	Washingtinia	4
28	Tree	English Gudhel	6
29	Tree	Washingtinia	3
30	Plant	Jatt Rupe	6
31	plant	Chandni Desi	4
32	Tree	Kinnu	2
33	Tree	Sheesham	1
34	Tree	Ashoka	4
35	Tree	Morpankhi	2
36	Tree	Ashok Pendula	7
37	Tree	Amrud	2
38	Tree	Gulmohri	4
39	Tree	Arjun	2
40	Tree	Safeda	1
41	Tree	Kaddi patta	3
		<b>Total</b>	<b>456</b>



**BUILDING DESIGN & LANDSCAPING**



**5. Greenery and Biodiversity on Campus**







## 6. Minimise Heat Exposure to Sun: Non-Roof

Minimizing heat exposure to the Sun for non-roof areas in universities can be achieved through a variety of strategies, including:

**Planting Trees and Greenery:** Trees and other vegetation provide natural shade and help to cool the surrounding environment through evapotranspiration.

**Installing Shade Structures:** Installing shade structures, such as pergolas or shade sails, can provide a shaded area for students and staff to stay calm and protect them from the Sun's heat.

**Creating Green walls and Green Roofs:** Green walls provide additional insulation and reduce the heat absorbed by buildings and surrounding areas.

**Using Cool Pavement:** Using light-colored or reflective pavement can reduce heat absorption and reflect sunlight into the atmosphere, helping to cool the surrounding area.

**Incorporating Water Features:** Water features, such as fountains or misting systems, can help cool the surrounding area through evaporative cooling.

**Creating Windbreaks:** Installing windbreaks, such as walls or hedges, can protect from the wind and reduce wind chill, making the area feel more relaxed.

**Providing Proper Ventilation:** Ensuring adequate ventilation in the area can help circulate air and prevent hot air buildup.

Minimizing heat exposure to the Sun for non-roof areas in universities involves incorporating shading, Greenery, cool pavement, water features, windbreaks, and proper ventilation into the design and operation of the campus. By implementing these strategies, universities can create a comfortable and safe outdoor environment for students and staff, even on hot days, while promoting sustainability and reducing energy consumption.





**6. Minimise Heat Exposure to Sun: Non-Roof**

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SSJB College's campus houses over 500 trees and plants across 11 acres, limiting impervious surface exposure to the sun.

This helps minimize the impact on the campus microclimate, reducing heat absorption and promoting a more relaxed environment.

<b>A.</b>	College campus area:	<b>43072.31 m<sup>2</sup></b>
<b>B.</b>	No. of existing trees / saplings planted:	<b>456</b>
<b>C.</b>	Total non-roof area, area covered with trees (foliage) or open grid pavers (the non-roof impervious areas include footpaths, pathways, roads, uncovered surface parking and other impervious areas)	<b>10170.95 m<sup>2</sup></b>





## 7. Minimise Heat Exposure to Sun: Roof

Minimizing heat exposure to the Sun on roofs in universities can be achieved through a combination of strategies, including:

**Cool Roofs:** Using cool roofs, designed to reflect more sunlight and absorb less heat, can help reduce the amount of heat absorbed by the shelter and transferred into the building.

**Green Roofs:** Installing a green roof, which involves planting vegetation on the surface, can provide natural insulation and reduce the heat the top absorbs. This can also help to improve biodiversity on the campus.

**Solar Shading Devices:** Installing solar shading devices, such as awnings or screens, can help block direct sunlight and reduce the amount of heat the roof absorbs. This can also provide shaded areas for students and staff to study or relax.

**Insulation:** Properly insulating the roof can help to prevent heat from penetrating the building and reduce the need for air conditioning.

**Ventilation:** Proper ventilation of the roof space can help to circulate air and reduce the buildup of hot air. This can be achieved through the installation of vents or fans.

**Maintenance:** Regular roof maintenance, cleaning and repairing any damage, can help ensure the roof functions efficiently and reduces heat absorption.

By incorporating these strategies into the design and operation of university buildings, it is possible to create a more comfortable and sustainable campus environment.

This can also reduce energy costs and improve the University's overall sustainability. Additionally, providing shaded and cool areas on roofs can encourage outdoor learning and activities, positively impacting student well-being and academic performance.



## 7. Minimise Heat Exposure to Sun: Roof

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Strategically planted trees provide shade to the roofs during summer while allowing sunlight during winter when leaves fall. Most roof areas are covered with solar panels or tiles and paint to reduce heat absorption, minimizing the microclimate impact.

Total Roof Area	3956.52 m <sup>2</sup>
Total Roof Area covered with tiles/paint/vegetation	3956.52 m <sup>2</sup>



## 8. Universal Design

Universal design is an approach to design that aims to create products, buildings, and environments accessible and usable by everyone, regardless of their age, abilities, or disabilities. For example, in the context of a university, universal design should be applied to create an inclusive learning environment that benefits all students, including those with disabilities.

Universal design can be incorporated into the design and operation of a university through...

**Building Design:** Buildings should be designed to be accessible and usable by people with disabilities. This includes ramps, wide doorways, elevators, and accessible restrooms.

**Classroom Design:** Classrooms should be accessible and usable by students with disabilities. This includes features such as adjustable desks, chairs, and lighting and ensuring classroom materials are available in accessible formats.

**Information Technology:** Information technology should be designed to be accessible to all users. This includes closed captioning on videos, text-to-speech options, and compatibility with assistive technology devices.

**Pedagogy:** Teaching methods should be designed to be inclusive of all students. This includes using various teaching methods, such as visual, auditory, and kinesthetic, and providing clear instructions and expectations.

**Campus Amenities:** Campus amenities, such as dining facilities and recreational areas, should be designed to be accessible and usable by people with disabilities.

By incorporating universal design principles into the design and operation of a university, it is possible to create an inclusive learning environment that benefits all students. This can help to improve the academic experience and outcomes for students with disabilities, as well as promote a more diverse and inclusive campus community.



**BUILDING DESIGN & LANDSCAPING**



**8. Universal Design**

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SSJB College implements Universal Design for Learning (UDL), ensuring all students, including differently-abled pupils, have equal learning opportunities. The campus features ramps, lifts, designated restrooms, and hindrance-free movement facilities, promoting accessibility and inclusion.



Cumulative Score

**63/80**



# WATER MANAGEMENT PRACTICES



Water management is a critical component of sustainability in a Green University. Some essential water management practices that a Green University should consider implementing:

**Rainwater Harvesting:** A Green University should have rainwater harvesting systems, such as rain barrels or cisterns, to collect rainwater from rooftops and other surfaces.

**Greywater Recycling:** A Green University should consider recycling greywater, wastewater from sinks, showers, and washing machines, for landscape irrigation.

**Low-Flow Fixtures:** A Green University should install low-flow fixtures, such as toilets, showerheads, and faucets, to reduce water consumption.

**Drought-Tolerant Landscaping:** A Green University should prioritize drought-tolerant landscaping, such as native plants, that require less water than traditional turf grass.

**Water Audits:** A Green University should conduct water audits to identify high-water use areas and implement measures to reduce water consumption.

**Leak Detection and Repair:** A Green University should regularly check for leaks in plumbing fixtures, irrigation systems, and other water systems.

**Educational Programs:** A Green University should also provide educational programs on water conservation for students, faculty, and staff. These programs can increase awareness of water conservation issues and promote sustainable water use behaviors.

Water management practices in a Green University should prioritize water conservation, reuse, and efficiency. By implementing these practices, the University can reduce its water consumption, conserve water resources, and promote sustainable water use.



## WATER MANAGEMENT PRACTICES



### 1. Rainwater Harvesting: Roof & Non-Roof

Rainwater harvesting is collecting, storing, and using rainwater for various purposes. It is an effective and sustainable method of conserving water, especially in regions where water is scarce or where water supply is unreliable.

Rainwater harvesting can be done through the roof and non-roof methods, both of which can be implemented in a university setting. Roof-based rainwater harvesting involves collecting rainwater that falls on rooftops and storing it for later use. This method is typically used in buildings with large roof areas and is relatively easy to implement.

The rainwater collected from the roofs can be used for a variety of purposes, including irrigation, flushing toilets, and washing clothes.

Non-roof rainwater harvesting, on the other hand, involves collecting rainwater from other surfaces such as pavements, lawns, and gardens. This method is typically used in open spaces such as parks, playgrounds, and other public areas.

Non-roof rainwater harvesting can be done using trenches, swales, and other surface-level structures that capture and store rainwater.

In a university setting, both roof-based and non-roof rainwater harvesting methods can be implemented to conserve water and reduce the demand for municipal water supply.

This can be done by installing rainwater collection systems on rooftops and in open spaces such as lawns, gardens, and parks. The collected rainwater can be used for irrigation, landscaping, and other non-potable uses.

Additionally, universities can also implement rainwater harvesting systems for potable water use. This can be done by treating the collected rainwater to make it safe for drinking and cooking. This approach requires a more sophisticated and expensive system than non-potable uses, but it can be a viable option in areas with limited water supply.

Rainwater harvesting is a sustainable and effective way to conserve water and reduce the demand for municipal water supply. In a university setting, implementing rainwater harvesting systems can reduce water usage and promote sustainable practices among students, staff, and faculty.





**WATER MANAGEMENT PRACTICES**



**Rainwater Harvesting: Roof & Non-Roof**

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SSJB College's rainwater harvesting system captures maximum runoff from roof and non-roof areas. This system enhances the groundwater table and reduces potable water usage, demonstrating the College's commitment to sustainable water management.

College has 46,54,000 ltr. capacity of rain water tank and from 30,4,920 Sq.ft. area rain water will be collected in it

<b>Average Normal Rainfall ®</b>					
<b>Location</b>	<b>Year</b>	<b>Peak Rainy Month</b>	<b>Total Rainfall (mm)</b>	<b>Number of rainy days</b>	<b>Normal rainfall/day (mm)</b>
Sirsa	2018	July	71.40	12	5.95
Sirsa	2019	July	113.0	13	8.69
Sirsa	2020	July	128.4	11	11.67
Sirsa	2021	June	93.30	12	7.78
Sirsa	2022	June	167.9	13	12.92
Average normal rainfall/ day (mm) = 9.402					
Average normal rainfall/ day (m) = 0.0094					

Rainwater Harvesting Capacity = 2500 m<sup>3</sup>

Runoff volumes harvested from Roof & Non-roof areas = 173.36 m<sup>3</sup>



## WATER MANAGEMENT PRACTICES



### Rainwater Harvesting: Roof & Non-Roof

#### Runoff coefficients for Typical Surface Types

Sr. No	Surface Type	Runoff coefficient
1	Cemented / Tiled Roof	0.95
2	Roof Garden (<100 mm thickness)	0.5
3	Roof Garden (100 – 200 mm thickness)	0.3
4	Roof Garden (201 – 500 mm thickness)	0.1
5	Turf, Flat (0 – 1% slope)	0.25
6	Turf, Average (1 - 3% slope)	0.35
7	Turf, Hilly (3 - 10% slope)	0.45
8	Vegetation, Flat (0 - 1% slope)	0.1
9	Vegetation, Average (1 - 3% slope)	0.2
10	Vegetation, Hilly (1 - 3% slope)	0.3
11	Concrete Pavement	0.95
12	Gravel Pavement	0.75
13	Open-grid Concrete Pavement	0.75
14	Open-grid Grass Pavement	0.50
15	Water Body	0.95
16	Playground	0.3



**WATER MANAGEMENT PRACTICES**



**Rainwater Harvesting: Roof & Non-Roof**

**Rain Water Harvesting Calculation**

Sr.No	SURFACETYPE	Run-off coefficient ( c )	Area (m <sup>2</sup> ) ( a )	Impervious area (m <sup>2</sup> ) I = ( c × a )
1	Tiled Roof	0.95	3956.52	3758.69
2	Playground	0.30	4805.38	1441.61
3	Turf, Flat (0-1% slope)	0.25	3277.22	819.31
4	Vegetation, average (1-3% slope)	0.20	12003.70	2400.64
5	Open Grid Pavement	0.50	17901.72	8950.86
6	Water Body	0.95	1128.27	1071.86
Total impervious area in sq.m. ( $\Sigma I$ )				18442.97
Average normal rainfall in m ( R )				0.0094
Total roof and non-roof run-off volume in cu.m ( $\Sigma I \times R$ )				173.36
Storage capacity of pond/ tank etc. in cu.				2500.0
Harvesting capacity of recharge pits in cu.m (3 no's)				
Percentage (%) of run-off volume harvested				





## 2. Water Efficient Plumbing Fixtures

Water-efficient plumbing fixtures are designed to conserve water while providing the same functionality as traditional fixtures. In addition, these fixtures use less water than conventional fixtures, which can help reduce water consumption and lower water bills. For example, the university can use the following to achieve water-efficient plumbing fixtures.

**Low-flow Toilets:** Low-flush toilets work with a minimal amount of water. The exact amount of water varies between less than a liter - 8 liters per flush. In addition, these toilets can operate by gravity or vacuum. This can save significant water, as conventional toilets use up to 15 liters per flush.

**Water-Saving Showerheads:** Water-saving showerheads can reduce water consumption by up to 50% compared to traditional showerheads while still providing a satisfying shower experience. These fixtures typically have a flow rate of 6 liters per minute or less.

**Faucet Aerators:** Faucet aerators mix air with water to reduce water use while still maintaining water pressure. These can be installed on any faucet, saving up to 50% of water usage.

**High-Efficiency Washing Machines:** High-efficiency washing machines use less water than traditional washing machines and are designed to be more efficient in water use. They can save up to 40% of water usage compared to traditional washing machines.

**Dual-Flush Toilets:** Dual-flush toilets have two flush options: solid waste and liquid waste. This reduces water usage for liquid waste, saving significant water consumption.

By using water-efficient plumbing fixtures, universities can reduce water usage and promote sustainable practices among students, staff, and faculty. Ensuring these fixtures are installed correctly and properly maintained is essential to ensure maximum efficiency and water conservation.



## WATER MANAGEMENT PRACTICES



### 2. Water Efficient Plumbing Fixtures

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SSJB College uses water-efficient plumbing fixtures in academic and hostel areas to reduce potable water consumption. These fixtures, including low-flow faucets, urinals, and toilets, help conserve water while maintaining performance standards.

#### Baseline Flow Rates for Plumbing Fixtures

Fixture Type	Maximum Flow Rate	Duration	Daily uses per person / day
Water Closets	8Litre per flush	1 flush	2
Urinals	2.41Lpm	1 flush	2
Health Faucet	5Lpm	0.25	1
Faucet/ Taps	2Lpm	0.25	4
Kitchen Taps	20Lpm	As per requirements	As per requirements
Showerhead	Nil	Nil	Nil

#### Water use reduction calculation over 1000 students and teachers

Fixture Type	Duration	Daily uses per person / day	Number of students & teachers (n)	Baseline	
				Flow rate /capacity (fb)	Total water use (litres) Tb = (n x fb)
Water Closets	1. Flush (Half Flush)	1. for male	1000	8 LPF	8000
		1. for female	NA	NA	NA
	1. Flush (Half Flush)	2. for female	NA	NA	NA
Urinals	1 Flush	2. for male	1000	2.4 LPM	4800
Health Faucet	0.25	1	1250	5 LPM	1562.5



### 3. Sustainable Turf Design

Sustainable turf design is an approach to landscaping and management that focuses on reducing the environmental impact of turf areas while maintaining their functionality and aesthetics. University can use the following principles of sustainable turf design:

**Reduce the Size of Turf Areas:** One of the most effective ways to reduce the environmental impact of turf areas is to reduce their size. This can be achieved by converting some areas to natural landscapes, such as meadows or native plant gardens.

**Choose Drought-Tolerant Grass Varieties:** Drought-tolerant grass varieties require less water and maintenance than traditional grass varieties. This can significantly reduce water usage and maintenance costs.

**Use Organic Fertilizers and Pest Control Methods:** Organic fertilizers and pest control methods are less environmentally harmful than traditional chemical methods. They can also promote soil health and reduce water pollution.

**Use Recycled Water for Irrigation:** Recycled water, such as greywater or rainwater, can be used for irrigation instead of potable water. This can save significant amounts of water and reduce the demand for municipal water supply.

**Implement low-Impact Maintenance Practices:** Low-impact maintenance practices, such as using manual tools instead of electric ones,

**Consider Alternative Turf Surfaces:** Alternative turf surfaces, such as synthetic turf or gravel, can be used in high-traffic areas where natural grass may not be feasible. In addition, these surfaces require less water and maintenance than natural grass.

By implementing sustainable turf design practices, universities can reduce environmental impact while maintaining functional and aesthetically pleasing outdoor spaces.

When designing and maintaining turf areas, it is essential to consider the local climate, soil conditions, and water availability.



**WATER MANAGEMENT PRACTICES**



**3. Sustainable Turf Design**

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The College's design minimizes natural resource impact while meeting functional and aesthetic expectations. SSJB College's turf areas contain many drought-tolerant species, reducing water consumption and maintaining landscape health.

Type of Vegetation	On Ground (sq.m.)
Turf	3277.22
Native species	6893.73
Drought tolerant species	3338.47
Other plant species	1771.00
Total	15280.42

Total landscaped area (sq.m) :	15280.42
Total Turf area (sq.m) :	3277.22
Percentage(%) of vegetated area with turf	35.48 %





#### 4. Water Efficient Landscaping

Water-efficient landscaping, also known as xeriscaping or drought-tolerant landscaping, is an approach to landscaping that focuses on reducing water consumption while still maintaining functional and aesthetically pleasing outdoor spaces. University can use these critical principles of water-efficient landscaping:

**Choose Drought-Tolerant Plants:** Drought-tolerant plants require less water than traditional plants and can still provide a lush and attractive landscape. Native plants are often a good choice as they are well-adapted to the local climate.

**Group Plants by Water Needs:** Grouping plants with similar water needs together can help reduce water usage by avoiding overwatering or underwatering. This can also help ensure that water is used efficiently.

**Use Efficient Irrigation Systems:** Drip irrigation systems and smart controllers can help reduce water usage by delivering water directly to the plants and adjusting water output based on weather conditions.

**Mulch Around Plants:** Mulch helps retain moisture in the soil, reducing the need for watering. It also suppresses weeds, which can compete with plants for water.

**Use Permeable Surfaces:** Permeable surfaces, such as gravel or permeable pavers, allow rainwater to soak into the soil instead of running off, reducing the need for irrigation.

**Consider Hardscaping:** Hardscaping, such as patios or walkways, can reduce the amount of lawn or plant beds, reducing water usage and maintenance needs.

By implementing water-efficient landscaping practices, universities can reduce water usage, save money on water bills and maintenance costs, and promote sustainable practices among students, staff, and faculty. Therefore, choosing the right plants and irrigation systems based on local climate and soil conditions is essential, and adequately maintaining the landscape ensures maximum efficiency and water conservation.



**WATER MANAGEMENT PRACTICES**



**4. Water Efficient Landscaping**

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SSJB College's landscaping is water-efficient, incorporating responsible irrigation practices and mulching. The vegetated area includes drought-tolerant species that require less water, contributing to sustainable landscaping.

Type of Vegetation	On Ground (sq.m.)
Turf	3277.22
Native species	6893.73
Drought tolerant species	3338.47
Other plant species	1771.00
Total	15280.42

Total landscaped area (sq.m). : 15280.42

Total area with native/ drought tolerant species (sq.m) : 10232.20

Percentage(%) of vegetated area with native and drought tolerant species : 23.76 %





## WATER MANAGEMENT PRACTICES



### 5. Water Efficient Irrigation System

Water-efficient irrigation systems are designed to deliver the right amount of water to plants while minimizing water waste. Therefore, the university can apply a few fundamental principles of water-efficient irrigation systems:

**Choose The Right System:** There are several types of irrigation systems, including drip irrigation, sprinklers, and soaker hoses. Choosing the right system depends on plant type, soil type, and local climate.

**Use an Intelligent Controller:** A smart controller can adjust the amount and frequency of water delivery based on weather conditions and plant needs. This can help reduce water waste and improve plant health.

**Use Water-Saving Nozzles and Heads:** Water-saving nozzles and heads can reduce water usage by up to 30% compared to traditional ones. These are available for both drip and sprinkler systems.

**Check for leaks and Maintenance Issues:** Regular maintenance can help ensure that the system is working efficiently and that there are no leaks or other issues that can waste water.

**Use Rainwater Harvesting:** Harvesting rainwater can provide a free source of water for irrigation, reducing the demand for potable water.

**Install a Soil Moisture Sensor:** Soil moisture sensors can help ensure that plants are receiving the right amount of water by measuring the moisture content of the soil. This can prevent overwatering or underwatering.

By implementing water-efficient irrigation systems, universities can reduce water usage and save money on water bills. Therefore, choosing the right design and components based on local climate and plant needs is essential, and adequately maintaining the system ensures maximum efficiency and water conservation.





## WATER MANAGEMENT PRACTICES



### 5. Water Efficient Irrigation System

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The College uses sprinkler irrigation systems that apply water directly to plant root zones, minimizing water usage and maintaining healthy landscapes.





## 6. Waste Water Treatment

Wastewater treatment is treating and cleaning sewage and other wastewater before it is released into the environment. Here are some fundamental principles of wastewater treatment for Universities:

**Primary Treatment:** Primary treatment involves the removal of large particles and solids from wastewater through physical processes such as screening and settling.

**Secondary Treatment:** Secondary treatment involves using biological processes to remove organic matter and nutrients from wastewater. This is typically done through activated sludge or other natural treatment systems.

**Tertiary Treatment:** Tertiary treatment involves the removal of remaining contaminants from the wastewater using processes such as filtration, disinfection, or chemical treatment. This is often necessary to meet regulatory standards for wastewater discharge.

**Reuse of Treated Water:** Treated wastewater can be reused for irrigation, flushing toilets, or other non-potable uses, reducing the demand for potable water and conserving resources.

**Energy Recovery:** Energy recovery systems, such as biogas capture or heat recovery, can be used to generate energy from the treatment process, reducing energy costs and promoting sustainability.

**Proper Disposal of Residual Sludge:** The residual sludge from the treatment process must be appropriately disposed of to prevent contamination of the environment. This may involve further treatment or disposal at a certified facility.

By implementing wastewater treatment systems in universities, the amount of wastewater pollution can be reduced, and the water quality in the surrounding environment can be improved. It is essential to choose suitable treatment systems based on the size of the university and local regulations and to properly maintain and monitor the systems to ensure maximum efficiency and compliance with regulatory standards.





## WATER MANAGEMENT PRACTICES



### 6. Waste Water Treatment

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SSJB College treats wastewater from toilets, showers, kitchens, and agricultural processes. Treated water is reused for flushing toilets and irrigating vegetated areas, reducing dependence on freshwater.





## WATER MANAGEMENT PRACTICES



### 7. Use of Treated Waste Water

Using treated wastewater in universities can provide several benefits, including reducing demand for potable water, conserving resources, and promoting sustainability. Here are some key ways that treated wastewater can be used in universities:

**Irrigation:** Treated wastewater can be used for irrigation of landscaping and agriculture, reducing the demand for potable water and conserving resources.

**Toilet Flushing:** Treated wastewater can be used for toilet flushing, reducing the demand for potable water and conserving resources.

**Cooling Systems:** Treated wastewater can be used in cooling systems, reducing the demand for potable water and conserving resources.

**Fire Protection:** Treated wastewater can be used for fire protection systems, reducing the demand for potable water and conserving resources.

**Industrial Uses:** Treated wastewater can be used for industrial processes that do not require potable water, reducing the demand for potable water and conserving resources.

It is essential to ensure that treated wastewater is safe for its intended use and that all regulatory standards are met. This requires proper treatment and monitoring of the wastewater treatment system.

Treated wastewater must also be clearly labeled and separated from potable water to avoid accidental consumption. Finally, communicating and educating the university community about the benefits and safe use of treated wastewater can promote acceptance and support for these sustainable practices.





## WATER MANAGEMENT PRACTICES



### 7. Use of Treated Waste Water

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SSJB College uses treated grey water for irrigation and flushing, conserving potable water, and replenishing surface and groundwater resources.





## 8. Water Use Monitoring

Water use monitoring in universities is critical to help identify water usage patterns and areas where water conservation measures can be implemented. Here are some essential steps for implementing water use monitoring in universities:

**Identify the Scope of the Monitoring:** Determine which buildings, areas, and water fixtures will be included in the monitoring program. This will depend on the size of the university and the availability of resources for monitoring.

**Install Water Meters:** Install water meters on all significant water lines and fixtures to measure water usage over time. This can help identify patterns and areas where water conservation measures can be implemented.

**Collect and Analyze Data:** Collect and analyze water usage data to identify areas of high water usage and potential areas for water conservation measures. This can also help track progress over time and identify trends.

**Set Targets and Goals:** Set targets and goals for water conservation based on the data collected. These can include reducing overall water usage or reducing water usage in specific areas or buildings.

**Implement Water Conservation Measures:** Implement water conservation measures based on the data and targets set. These can include repairing leaks, installing water-efficient fixtures, and promoting water-saving behaviors.

**Communicate with the University Community:** Communicate the goals and progress of the water use monitoring program to the university community. This can promote support and participation in water conservation efforts.

By implementing a water use monitoring program in universities, water usage patterns can be identified, and water conservation measures can be implemented to reduce overall water usage and promote sustainability. Therefore, it is essential to regularly monitor and analyze the data and communicate the progress and goals to the university community to maintain support and participation.





**WATER MANAGEMENT PRACTICES**



**8. Water Use Monitoring**

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Continuous water use monitoring helps SSJB College identify inefficiencies and implement corrective measures, ensuring sustainable water management.

Days	KAVERI	BOREWELL - 01 & 02	BOREWELL - 03	TANKER
365	CONS IN KL	CONS IN KL	CONS IN KL	CONS IN KL
	6994	12949	1808	6270

Days	REST OF BHASKARA	BHASKAR A	BHASKARA STP+ GARDEN
306	CONS IN KL	CONS IN KL	CONS IN KL
	7130	13441	18132

Cumulative Score

**57/80**





# AIR QUALITY LEVEL



Achieving good air quality is an essential aspect of sustainability in a Green University. Following critical practices that can help achieve good air quality:

**Energy-efficient HVAC Systems:** A Green University should prioritize energy-efficient heating, ventilation, and air conditioning (HVAC) systems that minimize the energy needed to heat or cool the building while maintaining good indoor air quality.

**Use of Non-Toxic Cleaning Products:** A Green University should prioritize using non-toxic cleaning products to reduce the amount of harmful chemicals released into the air.

**Proper Waste Management:** A Green University should prioritize appropriate waste management practices, including recycling and composting, to reduce the amount of waste sent to landfills. Landfills are a significant source of air pollution and can contribute to poor air quality.

**Green Transportation:** A Green University should promote sustainable transportation options, such as biking, walking, or taking public transportation, to reduce the number of vehicles on campus.

**Proper Ventilation:** A Green University should prioritize adequate ventilation to ensure good indoor air quality. This can include using natural ventilation, such as opening windows, or mechanical ventilation systems that bring in fresh air.

**Building Materials:** A Green University should prioritize using low-emission building materials, such as low-VOC paint, to reduce the amount of harmful chemicals released into the air.

## AIR QUALITY LEVEL



### 1. Tobacco Smoke Control

Tobacco smoke control is an important issue for universities, as exposure to secondhand smoke can have negative health effects on students, faculty, and staff. Here are some key principles for implementing tobacco smoke control measures in universities:

**Establish Smoke-Free Policies:** Establishing smoke-free policies for all campus buildings, facilities, and grounds is an important step in reducing exposure to secondhand smoke. These policies should be communicated clearly to students, faculty, and staff.

**Provide Smoking Cessation Resources:** Providing resources and support for smoking cessation, such as counseling and nicotine replacement therapy, can help smokers quit and reduce secondhand smoke exposure for others.

**Create Designated Smoking Areas:** If smoking is allowed on campus, create designated smoking areas in non-residential areas away from building entrances and common areas. These areas should be well-ventilated and have appropriate ashtrays for cigarette butts.

**Enforce Policies:** Enforce smoke-free policies through signage, education, and disciplinary actions if necessary. This will help promote compliance and reduce exposure to secondhand smoke.

**Monitor Air Quality:** Monitor air quality in buildings and other areas where smoking is allowed to ensure that levels of secondhand smoke are not harmful to non-smokers.

**Promote Awareness and Education:** Promote awareness and education about the risks of smoking and exposure to secondhand smoke through public health campaigns, educational programs, and community outreach.

By implementing tobacco smoke control measures in universities, the health and well-being of students, faculty, and staff can be promoted. It is important to establish clear policies, provide support for smoking cessation, and enforce policies to promote compliance and reduce exposure to secondhand smoke.

## AIR QUALITY LEVEL



### 1. Tobacco Smoke Control

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SSJB College enforces strict tobacco smoke control policies to ensure a healthy, smoke-free environment. Designated smoking areas are located away from buildings to minimize exposure to secondhand smoke.



## AIR QUALITY LEVEL



### 2. Day Lighting

Daylighting and the daylight factor are closely related concepts essential for sustainable building design in universities.

Daylighting is using natural light to illuminate interior spaces in buildings, reducing the need for artificial lighting and promoting energy efficiency. It involves strategically placing windows, skylights, and other openings to maximize the natural light entering a space while minimizing glare and overheating.

The daylight factor is a quantitative measure of the amount of natural light that reaches the interior of a building. It is calculated as the ratio of the amount of light that enters a space through windows and skylights to the amount of light that would enter the room if the entire window or skylight was open to the sky.

The daylight factor is expressed as a percentage and is typically measured at a height of 0.75 meters above the floor. In universities, daylighting and the daylight factor are essential considerations for promoting energy efficiency, improving productivity and comfort, and reducing environmental impact.

The following principles can help Universities can achieve daylighting and daylight factor.

**Design Buildings for Daylighting:** Incorporate daylighting into the design of new buildings and renovations by placing windows and skylights strategically to allow for maximum natural light.

**Use Daylighting Controls:** Use automated shading and dimming systems to regulate the amount of natural light in a space and reduce the need for artificial lighting.

Optimize window and skylight placement: Optimize the placement of windows and skylights to maximize natural light while minimizing glare and direct sunlight.

**Use Shading Devices:** Use shading devices, such as blinds and shades, to control the amount of natural light in a space and reduce glare and overheating.

**Monitor and Adjust:** Monitor the daylight factor regularly and adjust shading devices to maintain a comfortable and productive learning and working environment.

By implementing daylighting and the daylight factor in universities, natural light can be maximized, reducing the need for artificial lighting and promoting energy efficiency. Additionally, natural light has improved productivity and comfort for students and faculty, promoting a positive learning and working environment. Therefore, it is essential to design buildings for daylighting, use daylighting controls and shading devices, optimize window and skylight placement, and monitor and adjust as necessary to promote sustainable and comfortable learning and working environments.



**AIR QUALITY LEVEL**



**2. Day Lighting**

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The college's building design maximizes natural daylight, reducing the need for artificial lighting and promoting energy efficiency. Large windows and skylights are strategically placed to illuminate indoor spaces.

Sr.No	Visual task	Prescribed Daylight Factor		
		Carpet Ar.	Opening Ar.	VLT
1	Classroom	1039.66	150	70%
2	Laboratory	1039.66	15	70%
3	Library	1039.66	3	70%
4	Staff room, office area	900	30	70%

Average daylight factor can be calculated using the formula given below:  
 Day light factor =  $\frac{\text{Window area} \times \text{Actual visual transmittance (VLT) of glazing used}}{\text{constant} \times 100 \text{ Floor area}}$



## AIR QUALITY LEVEL



### 3. Fresh Air Ventilation

Fresh air ventilation is an essential component of sustainable building design in universities. It involves the controlled introduction of fresh air into a building to maintain indoor air quality, reduce the risk of indoor pollutants, and promote occupant health and well-being.

In universities, fresh air ventilation can be achieved through a variety of strategies, including natural ventilation, mechanical ventilation, or a combination of both. Here are some key principles for implementing fresh air ventilation in universities:

**Determine Ventilation Requirements:** Determine the ventilation requirements for each space based on the number of occupants and the type of activities that occur in the space.

**Use Natural Ventilation Where Possible:** Where possible use natural ventilation strategies, such as operable windows, to introduce fresh air into a space and reduce the need for mechanical ventilation.

**Use Mechanical Ventilation When Needed:** In spaces where natural ventilation is not feasible, use mechanical ventilation systems, such as air handling units, to introduce fresh air into a space.

**Use Energy Recovery Systems:** Use energy recovery systems, such as heat recovery ventilation (HRV) or energy recovery ventilation (ERV), to reduce the energy required for ventilation while still maintaining indoor air quality.

**Monitor and Adjust:** Monitor ventilation systems regularly to ensure that they are functioning properly and adjust them as necessary to maintain indoor air quality and occupant comfort.

By implementing fresh air ventilation in universities, indoor air quality can be maintained, reducing the risk of indoor pollutants and promoting occupant health and well-being. Additionally, by using natural ventilation strategies and energy recovery systems, energy can be saved, and sustainability can be promoted. It is important to determine ventilation requirements, use natural ventilation where possible, use mechanical ventilation when needed, use energy recovery systems, and monitor and adjust ventilation systems as necessary to promote a sustainable and comfortable learning and working environment.



**AIR QUALITY LEVEL**

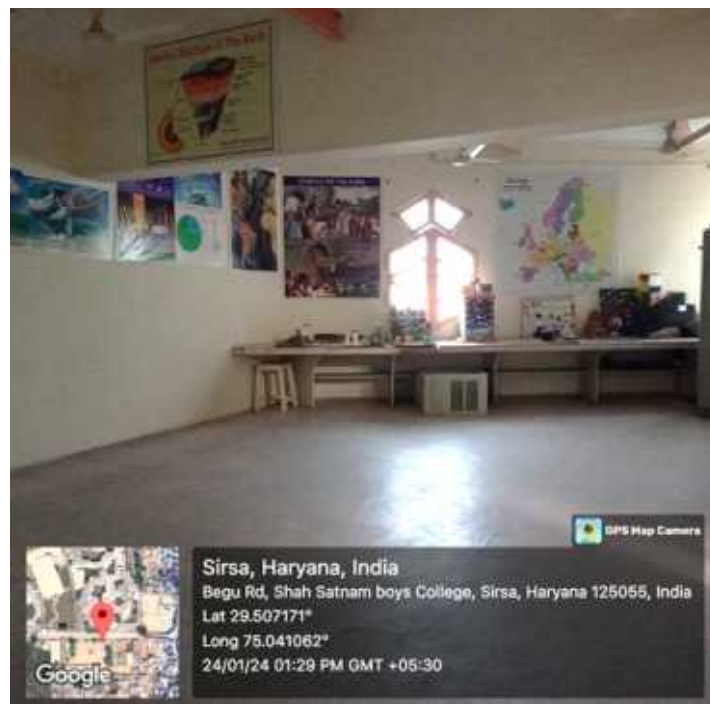


**3. Fresh Air Ventilation**

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SSJB College ensures adequate fresh air ventilation in all buildings to maintain indoor air quality. Mechanical ventilation systems and operable windows provide a constant supply of fresh air.

Space	Carpet area in m <sup>2</sup> (a)	Openable area in m <sup>2</sup> (b)	Prescribed percentage or openable area	Percentage or openable area (b/a) x 100	Achieved / Not achieved
Classroom	2799.79	398.69	19.20 %	14.24	Not Achieved
Lab	1448.16	188.26	19.20 %	13.00	Not Achieved
Library	196.67	39.33	19.20 %	20.00	Achieved
Indore Games	1705.64	119.39	19.20 %	7.00	Not Achieved



## AIR QUALITY LEVEL



### 4. Area of Class Room

The area of a classroom in a university can vary depending on the number of students and the type of activities that will take place in the space. However, there are some general guidelines and standards that can be used to determine the appropriate size for a classroom.

The Compendium of Architectural Norms and Guidelines for Educational Institutions of CPWD India has established standards for classroom sizes based on the number of students and the type of activities that will take place in the space.

The classroom area should also be designed to provide sufficient space for the various activities that will take place in the space, such as lectures, discussions, and group work. The classroom layout should allow for clear sightlines to the instructor and the board or screen and should provide sufficient space for seating, circulation, and storage.

Additionally, the classroom should be designed with acoustics in mind to ensure that sound is properly distributed and that there is minimal noise disturbance from external sources. Lighting should also be considered to provide adequate illumination for the various activities that will take place in the space.

In summary, the appropriate area for a classroom in a university will depend on various factors, such as the number of students and the type of activities that will take place in the space. However, established standards and guidelines can be used to ensure that the classroom provides sufficient space, clear sightlines, and proper acoustics and lighting for a comfortable and productive learning environment.

## AIR QUALITY LEVEL



### 4. Area of Class Room

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Classrooms at SSJB College are spacious and designed to accommodate optimal student-to-teacher ratios, ensuring a comfortable learning environment. Adequate space promotes better air circulation and student engagement.

No.	Category	No. of students per classroom	Minimum gross area of class rooms (inm <sup>2</sup> )/student
1.	Diploma	60	96.59
2.	Under Graduate	60	96.59
3.	Post Graduate	60	96.59



## 5. Anthropometric Dimensions in spaces

Anthropometric dimensions refer to the measurements of the human body and are an important consideration in the design of built-up spaces in universities. Designing spaces with appropriate anthropometric dimensions ensures that the spaces are comfortable and accessible for the occupants and can help to promote a healthy and productive learning environment.

Here are some common anthropometric dimensions to consider when designing built-up spaces in universities:

**Seating Height:** The height of chairs or benches should be appropriate for the intended occupants to ensure that they can comfortably sit and work for extended periods. The recommended seating height is between 16 and 20 inches for most adults.

**Desk or Table Height:** The height of desks or tables should be appropriate for the intended occupants to ensure that they can comfortably work and maintain good posture. The recommended desk or table height is between 28 and 30 inches for most adults.

**Door Width:** Doorways should be wide enough to accommodate the passage of people and equipment, including those with mobility aids. The recommended door width is at least 32 inches.

**Aisle Width:** Aisles and passageways should be wide enough to allow for the safe and efficient movement of people and equipment. The recommended aisle width is at least 36 inches.

**Corridor Width:** Corridors should be wide enough to allow for the safe and efficient movement of people and equipment, as well as to provide a sense of openness and accessibility. The recommended corridor width is at least 6 feet.

**Ceiling Height:** The height of ceilings can have a significant impact on the perceived spaciousness and comfort of a space. The recommended ceiling height for most built-up spaces in universities is between 9 and 10 feet.

By designing built-up spaces in universities with appropriate anthropometric dimensions, a comfortable and accessible environment can be created for the occupants. This can help to promote a healthy and productive learning environment and contribute to the overall well-being of the university community.

By designing restrooms in universities with appropriate anthropometric dimensions associated with toilet seat height, Toilet stall depth,

Grab bar height, Sink height, and Mirror height must be maintained to make toilets comfortable and accessible. This can help to promote hygiene, privacy, and overall well-being of the university community.



## AIR QUALITY LEVEL



### 5. Anthropometric Dimensions in spaces

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SSJB College considers anthropometric dimensions in the design of its facilities to ensure comfort and accessibility for all users. Furniture and spaces are designed to accommodate diverse body sizes and shapes.



## AIR QUALITY LEVEL



### 6. Toxin-free Environment

Creating a toxin-free environment in a university is an important aspect of promoting the health and well-being of students, faculty, and staff. Here are some strategies that can be implemented to create a toxin-free environment in a university:

**Use of Non-Toxic Cleaning Products:** Traditional cleaning products can contain toxic chemicals that can be harmful to the health of occupants. Consider using non-toxic cleaning products that are safe for both humans and the environment.

**Avoidance of Chemical Pesticides:** Chemical pesticides can have negative effects on both human health and the environment. Consider implementing integrated pest management strategies that use non-toxic methods of pest control, such as trapping or exclusion.

**Proper Ventilation:** Proper ventilation can help to reduce the concentration of indoor air pollutants, such as volatile organic compounds (VOCs) and carbon monoxide. Ensure that HVAC systems are properly maintained and that air filters are regularly changed.

**Use of Non-Toxic Building Materials:** Building materials, such as flooring, paint, and insulation, can contain toxic chemicals that can off-gas into the indoor environment. Consider using non-toxic building materials that are free from harmful chemicals.

**Indoor Plant Installation:** Indoor plants can help to purify the air by absorbing pollutants and producing oxygen. Consider installing indoor plants in common areas, such as classrooms and offices.

**Proper Waste Management:** Proper waste management can help to reduce the amount of toxins that are released into the environment. Consider implementing recycling and composting programs to divert waste from landfills.

By implementing these strategies, a university can create a toxin-free environment that promotes the health and well-being of occupants.



## AIR QUALITY LEVEL



### 6. Toxin-free Environment

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The college prioritizes the use of non-toxic materials and cleaning products to maintain a healthy environment. This approach minimizes exposure to harmful chemicals and promotes well-being.



## AIR QUALITY LEVEL



### 7. Dust-free Environment

Creating a dust-free environment in a university is important for promoting the health and well-being of students, faculty, and staff. Dust can contain a variety of allergens and pollutants that can cause respiratory problems and exacerbate existing health conditions. Here are some strategies that can be implemented to create a dust-free environment in a university:

**Regular Cleaning:** Regular cleaning is essential for maintaining a dust-free environment. Ensure that floors, walls, and surfaces are cleaned regularly to prevent the accumulation of dust.

**Use of HEPA Filters:** High-efficiency particulate air (HEPA) filters can help to remove dust particles from the air. Consider using HEPA filters in HVAC systems and portable air purifiers.

**Proper Ventilation:** Proper ventilation can help to reduce the concentration of dust particles in the air. Ensure that HVAC systems are properly maintained and that air filters are regularly changed.

**Reduction of Clutter:** Clutter can trap dust particles and make cleaning more difficult. Encourage occupants to keep their spaces tidy and free from clutter.

**Use of Doormats:** Doormats can help to reduce the amount of dust that is tracked into buildings. Consider using doormats at building entrances to help prevent dust from entering the building.

**Use of Natural Cleaning Products:** Traditional cleaning products can contain chemicals that can contribute to the accumulation of dust. Consider using natural cleaning products that are free from harmful chemicals.

By implementing these strategies, a university can create a dust-free environment that promotes the health and well-being of occupants.

## AIR QUALITY LEVEL



### 7. Dust-free Environment

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SSJB College employs dust control measures to maintain clean indoor air quality. Regular cleaning and maintenance routines help reduce dust accumulation.



## AIR QUALITY LEVEL



### 8. Exhaust Systems

Exhaust systems in a university are an important component of building ventilation systems. Exhaust systems are responsible for removing stale air and pollutants from indoor spaces and replacing them with fresh outdoor air. Here are some types of exhaust systems commonly found in universities:

**Bathroom Exhaust Fans:** Bathroom exhaust fans are typically installed in restrooms to remove excess moisture and odors. They help to prevent the growth of mold and mildew and improve indoor air quality.

**Kitchen Exhaust Systems:** Kitchen exhaust systems are designed to remove cooking fumes, smoke, and odors from commercial kitchens. They typically consist of hoods, ducts, and fans and are important for maintaining good indoor air quality and preventing fire hazards.

**Laboratory Exhaust Systems:** Laboratory exhaust systems are designed to remove hazardous fumes and pollutants from laboratory spaces. They are typically equipped with high-efficiency filters and fans to ensure that hazardous substances are safely removed from the building.

**General Exhaust Systems:** General exhaust systems are used to remove stale air and pollutants from common areas, such as hallways and lobbies. They help to maintain good indoor air quality and prevent the buildup of pollutants.

**Parking Garage Exhaust Systems:** Parking garage exhaust systems are designed to remove vehicle exhaust fumes and pollutants from enclosed parking garages. They typically consist of fans and ducts and are important for maintaining good indoor air quality and preventing the buildup of pollutants.

By ensuring that exhaust systems are properly installed and maintained, a university can ensure good indoor air quality and promote the health and well-being of occupants.

## AIR QUALITY LEVEL



### 8. Exhaust Systems

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The college utilizes exhaust systems in laboratories, kitchens, and other areas to remove pollutants and maintain air quality. These systems are essential for creating a safe and healthy environment.



Cumulative Score

61/80



# ENERGY USES & SAVING PRACTICES



Energy sourcing and saving practices are critical components of sustainability in a Green University. Some essential techniques that can help achieve these goals:

**Renewable Energy:** A Green University should prioritize the use of renewable energy sources, such as solar, wind, or geothermal power, to reduce reliance on fossil fuels and reduce greenhouse gas emissions.

**Energy-efficient Lighting:** A Green University should use energy-efficient lighting systems, such as LED lights, to reduce energy consumption.

**Energy-efficient Appliances:** A Green University should use energy-efficient appliances, such as refrigerators and washing machines, to reduce energy consumption.

**Energy Audits:** A Green University should conduct regular energy audits to identify areas of high energy use and implement measures to reduce energy consumption.

**Behavioral Changes:** A Green University should encourage sustainable energy practices among its students, faculty, and staff. This can include promoting energy-saving behaviors, such as turning off lights and electronics when not in use and providing education on the importance of energy conservation.

**Green University Accreditation:** A Green University should consider obtaining green University Accreditation from Green Mentors to demonstrate its commitment to sustainability and energy efficiency.







## ENERGY USES & SAVING PRACTICES



### 1. Ozone Depleting Substances

Ozone-depleting substances (ODS) are chemicals that can cause damage to the earth's ozone layer, which protects us from harmful ultraviolet radiation. These substances are commonly used in refrigeration, air conditioning, fire suppression systems, and other applications. Here are some ways in which a university can reduce its use of ODS:

**Retrofitting Equipment:** Old equipment that uses ODS can be retrofitted with alternative refrigerants that are more environmentally friendly. This can help to reduce the amount of ODS that is released into the atmosphere.

**Purchasing Equipment with Alternative Refrigerants:** When purchasing new equipment, choose models that use alternative refrigerants that are less harmful to the environment. This can help to reduce the university's overall use of ODS.

**Proper Disposal of ODS:** ODS should be properly disposed of to prevent them from entering the atmosphere. Work with qualified technicians to ensure that ODS are properly recovered and disposed of in accordance with local regulations.

**ODS Awareness and Training:** Educate staff, students, and faculty about the dangers of ODS and the importance of reducing their use. Training programs can help to raise awareness and promote responsible behavior.

**Use of Alternatives:** Consider using alternative products and technologies that do not contain ODS. For example, fire suppression systems can be replaced with alternatives that use inert gases or water mist.

By taking these steps, a university can reduce its use of ODS and help to protect the earth's ozone layer. This can have a positive impact on the environment and the health of future generations.





## ENERGY USES & SAVING PRACTICES



### 1. Ozone Depleting Substances

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SSJB College is committed to eliminating the use of ozone-depleting substances (ODS) in its operations. This includes transitioning to environmentally friendly refrigerants and avoiding materials that harm the ozone layer.





## ENERGY USES & SAVING PRACTICES



### 2. Energy Efficient Lighting Fixtures

Energy-efficient lighting fixtures are an important part of any university's efforts to reduce energy consumption and lower operating costs. Here are some examples of energy-efficient lighting fixtures that can be used in universities:

**LED Lighting:** LED lights are highly energy-efficient and can last up to 25 times longer than traditional incandescent bulbs. LED lighting can be used in various applications, including classrooms, offices, and outdoor spaces.

**CFL Lighting:** Compact fluorescent lights (CFLs) are another energy-efficient lighting option. They use up to 75% less energy than incandescent bulbs and can last up to 10 times longer.

**Occupancy Sensors:** Occupancy sensors can be used to automatically turn off lights in unoccupied areas, such as classrooms or offices. This can help to reduce energy waste and lower operating costs.

**Daylight Harvesting Systems:** Daylight harvesting systems use sensors to automatically adjust the amount of artificial light based on the available natural light. This can help to reduce energy consumption and improve the quality of light in indoor spaces.

**Task Lighting:** Task lighting is designed to provide lighting for specific tasks, such as reading or computer work. By using task lighting instead of overhead lighting, energy consumption can be reduced while maintaining adequate lighting levels.

By implementing energy-efficient lighting fixtures, a university can reduce its energy consumption and operating costs while also improving the quality of light in indoor spaces. Additionally, energy-efficient lighting fixtures can contribute to a more sustainable and environmentally friendly campus.

University has installed LED Lighting & Fixtures instead of old Lightning that reduces the environmental impacts associated with energy use.

University decided to replace all the old structured 36 W fluorescent-based lighting modules by 18 W LED T/L, 2×2 LED panels and required efficient lighting where needed.





**ENERGY USES & SAVING PRACTICES**



**2. Energy Efficient Lighting Fixtures**

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SSJB College has installed energy-efficient lighting fixtures across its campus, including LED lights and motion sensor-activated systems. These measures significantly reduce energy consumption and lower the institution's carbon footprint.

The transition to LED lighting has resulted in a substantial decrease in electricity use. Motion sensors in classrooms, hallways, and restrooms ensure that lights are only on when necessary, further enhancing energy efficiency.

<b>BASECASE SCENARIO - Lighting Fixtures</b>						
Number of working days (n)						
Location	Carpet area (sq.m)	Number of fixtures (f)	Luminare capacity (kW)	Operating hours (hr)	Energy consumption by lighting fixtures in a day (kW x hr x f)	Total energy consumption by lighting fixtures in entire year (W x Hr x f x n)
Classrooms	2799.79	540	17.5 kw	5.30 Hr.	140	28000
Labs	1448.16	538	(total)	5.30 Hr.	69.2	13840
<b>Total:</b>						<b>41840</b>





## ENERGY USES & SAVING PRACTICES



### 3. Energy Efficient Fans

Energy-efficient fans and air-conditioners are important in universities as they can help reduce energy consumption and lower operating costs. Here are some examples of energy-efficient fans and air-conditioners that can be used in universities:

**High-Efficiency Ceiling Fans:** Ceiling fans can be a cost-effective way to cool indoor spaces. High-efficiency ceiling fans can be up to 20% more efficient than standard ceiling fans, helping to reduce energy consumption and lower operating costs.

**Variable Speed Air Handlers:** Variable-speed air handlers can be used with central air-conditioning systems to help reduce energy consumption. These systems can adjust the speed of the fan based on the cooling needs of the indoor space, helping to save energy and reduce operating costs.

**Energy-Efficient Window Air-Conditioners:** Window air-conditioners can be an energy-efficient option for cooling small spaces, such as individual offices or dorm rooms. Look for models with the BEE STAR rating 1 to 5, the ascending order of energy efficiency, which indicates that they meet the energy efficiency level.

**Split-System Air-Conditioners:** Split-system air-conditioners are designed to cool individual rooms or spaces. They are more energy-efficient than traditional central air-conditioning systems, as they only cool the spaces that need them.

**Heat Pumps:** Heat pumps can be used for both heating and cooling indoor spaces. They are more energy-efficient than traditional heating and cooling systems, as they transfer heat rather than create it. Heat pumps are particularly effective in moderate climates.

By implementing energy-efficient fans and air-conditioners, a university can reduce its energy consumption and operating costs while maintaining a comfortable indoor environment for students, staff, and faculty. Additionally, energy-efficient fans and air-conditioners can contribute to a more sustainable and environmentally friendly campus.





## ENERGY USES & SAVING PRACTICES



### 3. Energy Efficient Fans

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The college has replaced traditional fans with energy-efficient models that consume less power while providing adequate ventilation. This upgrade supports the college's overall energy conservation goals. Total 346 Fans are in college.

Energy-efficient fans at SSJB College are designed to operate at lower wattage without compromising airflow. This reduces energy consumption and contributes to a more comfortable indoor environment.







## ENERGY USES & SAVING PRACTICES



### 4. Energy Efficiency in Appliances & Equipment

Energy efficiency in appliances and equipment is important in universities as it can help reduce energy consumption and lower operating costs. Here are some examples of energy-efficient appliances and equipment that can be used in universities:

**Energy-Efficient Computers and Monitors:** Energy-efficient computers and monitors can help reduce energy consumption in computer labs and offices. Look for models that have earned the BEE STAR label, which indicates that they meet energy efficiency guidelines set by the Bureau of Energy Efficiency.

**Energy-Efficient Refrigerators and Freezers:** Energy-efficient refrigerators and freezers can help reduce energy consumption in university dining halls, cafeterias, and research labs. Look for models that have earned the ENERGY STAR label, which indicates that they meet energy efficiency guidelines set by the Bureau of Energy Efficiency.

**Energy-Efficient HVAC Systems:** Energy-efficient heating, ventilation, and air conditioning (HVAC) systems can help reduce energy consumption in university buildings. Look for systems that have earned the ENERGY STAR label, which indicates that they meet energy efficiency guidelines set by the Bureau of Energy Efficiency.

**Energy-Efficient Lighting Controls:** Lighting controls, such as occupancy sensors and daylight harvesting systems, can help reduce energy consumption in university buildings by automatically adjusting lighting based on occupancy and available natural light.

**Energy-Efficient Water Heaters:** Energy-efficient water heaters can help reduce energy consumption in university dormitories and athletic facilities. Look for models that have earned the ENERGY STAR label, which indicates that they meet energy efficiency guidelines set by the Bureau of Energy Efficiency.

By implementing energy-efficient appliances and equipment, a university can reduce its energy consumption and operating costs while maintaining the necessary functionality of its facilities. Additionally, energy-efficient appliances and equipment can contribute to a more sustainable and environmentally friendly campus





## ENERGY USES & SAVING PRACTICES



### 4. Energy Efficiency in Appliances & Equipment

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SSJB College prioritizes the use of energy-efficient appliances and equipment in its laboratories, offices, and common areas. This includes refrigerators, air conditioners, computers, and other electronic devices

Energy-efficient appliances are selected based on their Energy Star ratings and other certification standards. The college regularly audits its equipment to ensure optimal performance and energy savings.





## ENERGY USES & SAVING PRACTICES



### 5. Energy Sub-Metering

Energy sub-metering is the practice of installing meters to measure energy consumption in specific areas or systems within a building, such as lighting, HVAC, and plug loads. In a university setting, energy sub-metering can be used to identify areas of high energy consumption and implement energy-saving measures to reduce energy consumption and costs. Here are some benefits of energy sub-metering in universities:

**Identify Areas of High Energy Consumption:** Energy sub-metering can help identify areas of high energy consumption within a university. By identifying these areas, universities can target energy-saving measures to reduce energy consumption and costs.

**Allocate Energy Costs:** Energy sub-metering can help allocate energy costs to specific departments or buildings within a university. This can provide an incentive for departments to reduce energy consumption and costs.

**Monitor Energy Performance:** Energy sub-metering can help monitor energy performance over time. By monitoring energy performance, universities can track energy consumption and identify trends or anomalies.

**Improve Sustainability:** Energy sub-metering can help universities achieve their sustainability goals by reducing energy consumption and carbon emissions.

When implementing energy sub-metering in a university, it is important to ensure that the meters are accurate, reliable, and installed correctly. Additionally, data from the meters should be collected and analyzed to identify opportunities for energy savings.





## ENERGY USES & SAVING PRACTICES



### 5. Energy Sub-Metering

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SSJB College has implemented energy sub-metering to monitor and manage electricity usage in different buildings and departments. This helps identify areas of high consumption and opportunities for improvement.

Submetering allows the college to track energy use in real time, enabling targeted interventions to reduce wastage. Data from submeters is analyzed to develop strategies for further energy conservation.





## ENERGY USES & SAVING PRACTICES



### 6. On-Site Renewable Energy

On-site renewable energy in universities refers to the installation of renewable energy systems on university campuses to generate electricity or heat. On-site renewable energy can help universities reduce their reliance on fossil fuels and reduce their carbon emissions. Following options of on-site renewable energy systems that can be installed in universities:

**Solar Photovoltaic (PV) Systems:** Solar PV systems can be installed on university buildings or in open areas on campus to generate electricity. Solar PV systems are relatively low-maintenance and have a long life span, making them a good investment for universities.

**Wind Turbines:** Small-scale wind turbines can be installed on university campuses to generate electricity. Wind turbines require more maintenance than solar PV systems and are less reliable, but they can be a good option in areas with high wind speeds.

**Geothermal Heating and Cooling Systems:** Geothermal heating and cooling systems can be installed in university buildings to provide heating and cooling using energy from the ground. Geothermal systems are highly efficient and can reduce heating and cooling costs for universities.

**Biomass Heating Systems:** Biomass heating systems can be installed in university buildings to provide heat using renewable biomass fuels, such as wood chips or pellets. Biomass heating systems require regular maintenance and can be more expensive to install than other renewable energy systems, but they can provide a reliable source of heat for universities.

By installing on-site renewable energy systems, universities can reduce their energy consumption and carbon emissions while demonstrating their commitment to sustainability. Additionally, on-site renewable energy systems can provide educational opportunities for students and faculty, as well as research opportunities for university researchers.





## ENERGY USES & SAVING PRACTICES



### 6. On-Site Renewable Energy

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SSJB College will invest in on-site renewable energy systems, including 20KW solar panels and wind turbines, to generate clean energy. These systems reduce the college's reliance on fossil fuels.

Solar panels installed on rooftops and other strategic locations harness solar energy, providing a significant portion of the college's electricity needs. Wind turbines complement this by generating power from wind, making the campus more sustainable.







## ENERGY USES & SAVING PRACTICES



### 7. Solar Water Heating Systems

Solar water heating systems are a type of renewable energy system that can be installed in universities to heat water using energy from the sun. Solar water heating systems can be installed on university buildings, such as dormitories, gymnasiums, or cafeterias, to provide hot water for showers, sinks, and other uses.

Here are some benefits of installing solar water heating systems in universities:

**Energy Cost Savings:** Solar water heating systems can help universities save money on energy costs by reducing the need for electricity or natural gas to heat water.

**Reduced Carbon Emissions:** Solar water heating systems can help universities reduce their carbon emissions by using renewable energy to heat water.

**Educational Opportunities:** Solar water heating systems can provide educational opportunities for students and faculty to learn about renewable energy technologies and their applications.

**Increased Resilience:** Solar water heating systems can provide increased resilience to universities by providing hot water even during power outages or other disruptions to the electrical grid.

When installing solar water heating systems in universities, it is important to ensure that the systems are designed and installed correctly to maximize their efficiency and lifespan. Additionally, regular maintenance and monitoring should be performed to ensure that the systems are operating effectively and efficiently.





## ENERGY USES & SAVING PRACTICES



### 7. Solar Water Heating Systems

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The college utilizes solar water heating systems to provide hot water for various uses, reducing the need for conventional water heating methods.

Solar water heaters installed on campus leverage sunlight to heat water, reducing electricity or gas consumption. This sustainable approach not only saves energy but also lowers utility costs.





## ENERGY USES & SAVING PRACTICES



### 8. Distributed Power Generation

Distributed power generation is a type of energy system that involves generating electricity from small-scale power sources located close to the point of use instead of from a centralized power plant. Universities can benefit from distributed power generation by installing renewable energy systems such as solar panels or wind turbines on their campuses.

Here are some benefits of distributed power generation in universities:

**Reduced Energy Costs:** Distributed power generation can help universities save money on energy costs by generating electricity on-site and reducing their reliance on grid-supplied electricity.

**Reduced Carbon Emissions:** Distributed power generation can help universities reduce their carbon emissions by using renewable energy sources to generate electricity.

**Increased Resilience:** Distributed power generation can provide increased resilience to universities by providing a local source of electricity in case of power outages or other disruptions to the electrical grid.

**Educational Opportunities:** Distributed power generation can provide educational opportunities for students and faculty to learn about renewable energy technologies and their applications.

Examples of distributed power generation systems that can be installed in universities include:

**Solar Photovoltaic (PV) Systems:** Solar PV systems can be installed on university buildings or in open areas on campus to generate electricity.

**Wind Turbines:** Small-scale wind turbines can be installed on university campuses to generate electricity.

**Micro-Hydro Systems:** Micro-hydro systems can be installed on university campuses to generate electricity using the energy from flowing water.

**Combined Heat and Power (CHP) Systems:** CHP systems can be installed in university buildings to generate both electricity and heat from a single system.

By installing distributed power generation systems, universities can reduce their energy costs, carbon emissions, and reliance on grid-supplied electricity while demonstrating their commitment to sustainability.





## ENERGY USES & SAVING PRACTICES



### 8. Distributed Power Generation

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SSJB College employs distributed power generation systems to enhance energy resilience and efficiency. This includes combined heat and power (CHP) systems that utilize waste heat for additional energy savings.

Distributed power generation systems at SSJB College ensure a reliable power supply while maximizing energy efficiency. These systems reduce transmission losses and improve overall energy management on campus.



Cumulative Score

57/80



# HEALTH & HYGIENE PRACTICES



Health and hygiene practices are essential considerations in a Green University, as they can help ensure the well-being of students, faculty, and staff while also promoting sustainability. Following critical practices that can help achieve these goals:

**Clean Drinking Water:** A Green University should prioritize clean drinking water by regularly testing and treating the water supply to ensure it meets quality standards.

**Sustainable Food Options:** A Green University should prioritize sustainable food options, such as locally sourced and organic foods, to promote healthy eating and reduce the environmental impact of food production.

**Handwashing and Sanitizing Stations:** A Green University should provide ample handwashing and sanitizing stations throughout its buildings to promote good hygiene and prevent the spread of illness.

**Safe and Sustainable Cleaning Products:** A Green University should prioritize using safe and sustainable cleaning products to reduce the amount of harmful chemicals released into the environment.

**Waste Management:** A Green University should prioritize proper waste management practices, including recycling and composting, to reduce the amount of waste sent to landfills.

**Sustainable Transportation:** A Green University should promote sustainable transportation options, such as biking, walking, or taking public transportation, to reduce the number of vehicles on campus. This can help reduce air pollution and promote good health.

**Mental Health Support:** A Green University should prioritize mental health support services for its students, faculty, and staff to promote overall well-being.





## HEALTH & HYGIENE PRACTICES



### 1. Toilet Facilities

Restrooms and toilets are important facilities in universities that need to be designed to meet the needs of the students, faculty, and staff. Proper design and maintenance of these facilities can help promote hygiene, reduce water usage, and ensure accessibility for all. Some factors to be considered when designing restrooms and toilets in universities:

**Accessibility:** Restrooms and toilets should be designed to be accessible for people with disabilities, including wheelchair users. This includes providing adequate space, grab bars, and accessible fixtures.

**Gender Inclusivity:** Restrooms and toilets should be designed to be inclusive of all gender identities, with options for single-user restrooms and multi-user restrooms with privacy features.

**Hygiene:** Restrooms and toilets should be designed to promote good hygiene, with features such as touchless fixtures, automatic flush systems, and hand sanitizing stations.

**Water Efficiency:** Restrooms and toilets should be designed with water-efficient fixtures, such as low-flow toilets and faucets, to reduce water usage and promote sustainability.

**Maintenance:** Restrooms and toilets should be designed with ease of maintenance in mind, with durable and easy-to-clean materials and regular cleaning schedules.

When designing restrooms and toilets in universities, it is important to consider the specific needs and requirements of the campus community, as well as applicable laws and regulations related to accessibility and hygiene. Regular maintenance and monitoring should also be performed to ensure that the facilities are operating effectively and efficiently.







## HEALTH & HYGIENE PRACTICES



### 1. Toilet Facilities

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SSJB College maintains high standards for its toilet facilities, ensuring they are clean, well-maintained, and equipped with water-saving fixtures. Regular sanitation and maintenance routines are followed to ensure hygiene.

Toilet facilities are cleaned multiple times a day and stocked with necessary supplies. Water-saving fixtures like dual-flush toilets and low-flow faucets help conserve water while maintaining hygiene standards.





## HEALTH & HYGIENE PRACTICES



### 2. Drinking Water Facility

Drinking water is a basic necessity, and providing access to clean and safe drinking water is an important aspect of ensuring the health and well-being of students, faculty, and staff in universities. A few suggested criteria associated with drinking water facilities in universities:

**Accessibility:** Drinking water facilities should be easily accessible to all members of the campus community, including people with disabilities. This may involve providing wheelchair-accessible fountains or bottle filling stations.

**Water Quality:** The quality of the drinking water provided in universities should meet or exceed applicable standards and regulations for drinking water. Regular testing and monitoring should be performed to ensure that the water is safe to drink.

**Water Conservation:** Drinking water facilities should be designed to promote water conservation, with features such as low-flow fountains and automatic shut-off valves.

**Maintenance:** Regular maintenance and cleaning of drinking water facilities are important to ensure their continued functionality and hygiene.

**Education:** Providing information to students, faculty, and staff about the importance of staying hydrated and the availability of drinking water facilities can help promote healthy habits and reduce waste from single-use water bottles.

When designing and maintaining drinking water facilities in universities, it is important to consider the needs and preferences of the campus community, as well as applicable laws and regulations related to water quality and accessibility. Providing access to clean and safe drinking water is an important step in promoting the health and well-being of the campus community.





## HEALTH & HYGIENE PRACTICES



### 2. Drinking Water Facility

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The college provides access to safe and clean drinking water through filtered water stations placed strategically around the campus. Regular testing ensures water quality meets health standards.

Water stations are equipped with advanced filtration systems to remove contaminants, ensuring the safety and health of the campus community. These facilities are regularly inspected and maintained.





## HEALTH & HYGIENE PRACTICES



### 3. Access to Healthy Food

Access to healthy food is an important aspect of promoting the health and well-being of students, faculty, and staff in universities. The following can be considered while planning to provide access to healthy food in universities:

**Availability:** Healthy food options should be readily available on campus, including in dining halls, cafes, vending machines, and other food service areas.

**Variety:** Offering a wide variety of healthy food options can help ensure that the needs and preferences of all members of the campus community are met.

**Nutrition:** Healthy food options should be nutritious, with an emphasis on fresh fruits and vegetables, whole grains, lean protein, and healthy fats.

**Affordability:** The cost of healthy food options should be comparable to other food options on campus to ensure that they are accessible to all members of the campus community.

**Sustainability:** The food options provided on campus should be sourced in a sustainable and socially responsible manner, with a focus on reducing waste and supporting local and organic food systems.

**Education:** Providing education and information about healthy eating habits can help promote healthy lifestyles and encourage members of the campus community to make informed food choices.

When designing and maintaining food service areas in universities, it is important to consider the needs and preferences of the campus community, as well as applicable laws and regulations related to food safety and accessibility. Providing access to healthy and nutritious food is an important step in promoting the health and well-being of the campus community.





## HEALTH & HYGIENE PRACTICES



### 3. Access to Healthy Food

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SSJB College promotes healthy eating by offering nutritious food in its canteen and cafeteria. Emphasis is placed on providing fresh, locally sourced, and organic food

The college canteen features a variety of healthy meal options, including salads, fruits, whole grains, and lean proteins. To ensure quality and sustainability, efforts are made to source ingredients from local farmers and organic suppliers.





## HEALTH & HYGIENE PRACTICES



### 4. Sports Amenities

Sports amenities in universities are essential for promoting physical activity, encouraging healthy lifestyles, and providing opportunities for socialization and community building. Here are some standard sports amenities found in universities:

**Athletic Fields:** Universities often have athletic fields for sports such as soccer, football, lacrosse, and baseball.

**Indoor Gymnasiums:** Indoor gymnasiums may include basketball courts, volleyball courts, badminton courts, and other facilities for indoor sports.

**Fitness Centers:** Fitness centers typically include exercise equipment such as treadmills, ellipticals, weights, and resistance machines.

**Swimming Pools:** Swimming pools provide opportunities for aquatic sports and fitness activities.

**Tennis and squash courts:** Tennis and squash courts provide opportunities for racquet sports.

**Climbing Walls:** Climbing walls are becoming increasingly popular in universities, providing opportunities for rock climbing and other vertical activities.

**Outdoor Recreational Areas:** Universities may also have outdoor recreational areas for hiking, camping, and picnicking.

When designing and maintaining sports amenities in universities, it is essential to consider the needs and preferences of the campus community, as well as applicable laws and regulations related to safety and accessibility. In addition, providing a variety of sports amenities can help ensure that all campus community members have opportunities to engage in physical activity and promote healthy lifestyles.







## HEALTH & HYGIENE PRACTICES



### 4. Sports Amenities

The college provides essential sports amenities to encourage physical activity among students. These facilities are maintained to ensure safety and accessibility.





## HEALTH & HYGIENE PRACTICES



### 5. Dedicated Playground

A dedicated playground for sports in a university can provide students, faculty, and staff with space for organized and informal sports activities. Points to be considered when designing a playground for sports in a university:

**Space:** The playground size will depend on the number and types of sports that will be played. Consider the size of the field or court needed for each sport, as well as any additional space for spectator seating, restrooms, and storage.

**Surface:** The type of surface used on the playground can affect the safety and performance of the athletes. Options include natural grass, synthetic turf, concrete, and asphalt.

**Lighting:** Adequate lighting is essential for evening and nighttime use of the playground. Consider the placement and brightness of the lights and any energy efficiency measures that can be implemented.

**Equipment:** Depending on the sports played, the playground may require equipment such as basketball hoops, soccer goals, volleyball nets, and tennis nets. It is important to ensure that the equipment is safe, durable, and properly maintained.

**Accessibility:** The playground should be accessible to all members of the campus community, including those with disabilities. This may involve the installation of ramps, accessible seating, and other features to ensure that the playground is compliant with relevant accessibility guidelines and regulations.

When designing a playground for sports in a university, it is important to involve stakeholders from across the campus community to ensure that the design meets the needs and preferences of all users. This may include student organizations, athletic departments, facilities management, and disability services offices.





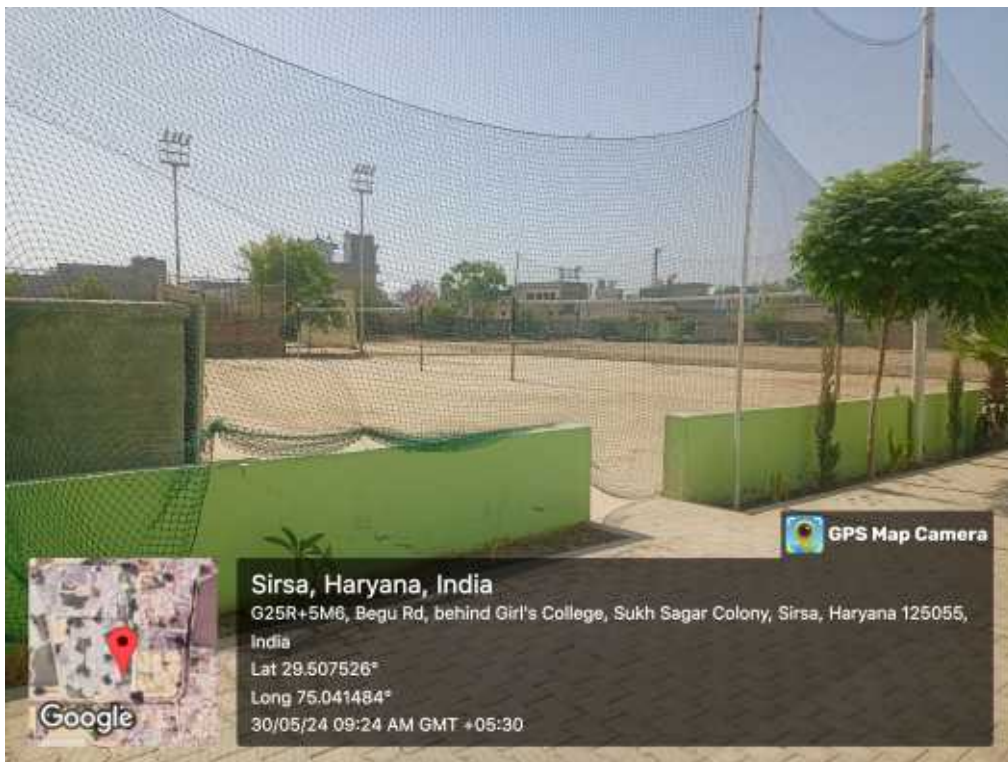
**HEALTH & HYGIENE PRACTICES**



**5. Dedicated Playground**

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SSJB College has a dedicated playground area that supports various recreational and sporting activities and is designed to promote physical fitness and well-being.





## HEALTH & HYGIENE PRACTICES



### 6. Organic Fertilizers and Pesticides

Using organic fertilizers and pesticides in a university can benefit the environment and the health of students, faculty, and staff. Here are some considerations when implementing organic fertilizers and pesticides in a university:

**Soil Health:** Organic fertilizers are made from natural materials and help to improve soil health by increasing microbial activity and promoting the growth of beneficial microorganisms. This can result in healthier plants and a more sustainable campus environment.

**Reduced Chemical Exposure:** Organic pesticides are made from natural ingredients and are less toxic than chemical pesticides, which can harm human health and the environment. Using organic pesticides can reduce the risk of exposure to these chemicals.

**Environmental Benefits:** Organic fertilizers and pesticides are generally considered more environmentally friendly than their chemical counterparts, as they do not contribute to water and air pollution or harm wildlife.

**Cost:** Organic fertilizers and pesticides can be more expensive than chemical products, but the long-term benefits to soil health and environmental sustainability may outweigh the upfront costs.

**Education:** Implementing organic fertilizers and pesticides in a university can also provide opportunities for education and outreach about sustainable practices and environmental stewardship. This can raise awareness among students, faculty, and staff about the importance of sustainable agriculture and pest management.

When implementing organic fertilizers and pesticides in a university, consulting with experts in sustainable agriculture and pest management is essential to ensure that the products used are effective and safe for the campus environment. Additionally, it may be necessary to invest in training for facilities management staff and groundskeepers to ensure they can implement these practices properly.





## HEALTH & HYGIENE PRACTICES



### 6. Organic Fertilizers and Pesticides

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The college uses organic fertilizers and pesticides for its landscaping and gardening activities, ensuring a healthy and eco-friendly environment.

Organic fertilizers and pesticides reduce chemical runoff and improve soil health. SSJB College's commitment to organic practices supports biodiversity and sustainable campus landscaping.







## HEALTH & HYGIENE PRACTICES



### 7. Green Housekeeping

Green housekeeping in a university involves implementing sustainable cleaning practices to reduce the negative environmental impact of cleaning products and processes. Some criteria associated with green housekeeping in a university:

**Environmentally Friendly Cleaning Products:** Using environmentally friendly cleaning products can reduce the amount of harmful chemicals that are released into the environment. Look for cleaning products certified by organizations such as Green Seal or EcoLogo, and avoid products that contain volatile organic compounds (VOCs) or other harmful chemicals.

**Water Conservation:** Implementing water conservation measures during cleaning can reduce water use, such as using low-flow cleaning equipment and mops and minimizing water use for rinsing. Additionally, using microfiber cleaning cloths can help reduce water usage and the amount of cleaning product needed.

**Waste Reduction:** Implementing waste reduction measures such as using reusable cleaning cloths and mops, and reducing the use of disposable cleaning products, can help to reduce the amount of waste generated by the cleaning process.

**Energy Conservation:** Utilizing energy-efficient equipment such as vacuums and floor polishers can help reduce energy consumption during cleaning.

**Education:** Providing education and training for cleaning staff on sustainable cleaning practices and the proper use of cleaning products can help to ensure that these practices are implemented effectively.

By implementing green housekeeping practices in a university, the campus can reduce its environmental impact, improve indoor air quality, and promote sustainability. These practices can also improve the health and well-being of students, faculty, and staff by reducing their exposure to harmful chemicals and allergens.





## HEALTH & HYGIENE PRACTICES



### 7. Green Housekeeping

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SSJB College employs green housekeeping practices, using eco-friendly cleaning products and methods that minimize environmental impact. These practices ensure a clean and healthy campus environment.



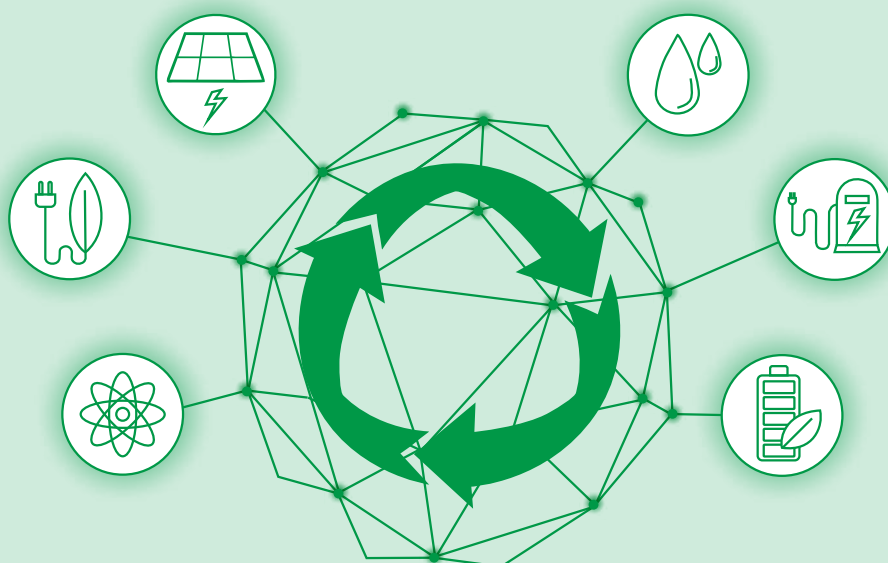
Cumulative Score

50/70





# SUSTAINABLE RESOURCES UTILIZATION



A Green University should prioritize water conservation practices, such as low-flow faucets and toilets, to reduce water consumption on campus. The University can also implement rainwater harvesting systems to collect and reuse rainwater for non-potable uses like landscaping or toilet flushing.

**Materials Management:** A Green University should prioritize materials management practices, such as recycling and composting, to reduce the amount of waste sent to landfills.

**Energy Conservation:** A Green University should prioritize energy conservation practices, such as energy-efficient lighting and appliances, to reduce energy consumption on campus.

**Transportation:** A Green University should prioritize sustainable transportation practices, such as biking, walking, and public transit, to reduce the carbon footprint of transport on campus.

**Land Use:** A Green University should prioritize sustainable land use practices, such as preserving green space and wildlife habitat, to promote biodiversity and ecosystem health.

**Procurement:** A Green University should prioritize sustainable procurement practices, such as purchasing products from sustainable materials and minimizing packaging waste.

**Education and Outreach:** A Green University should prioritize education and outreach efforts to promote sustainable resource utilization among its students, faculty, and staff.

Sustainable resource utilization in a Green University should prioritize water conservation, materials management, energy conservation, sustainable transportation, land use, procurement, and education and outreach. A Green University can promote a more sustainable future by implementing these practices.





## SUSTAINABLE RESOURCES UTILIZATION



### 1. Waste Segregation

Waste segregation in a university separates different types of waste materials for proper disposal or recycling. Proper waste segregation is crucial for managing waste effectively and reducing waste in landfills.

Waste segregation guidelines for a university:

**Education and Training:** Proper education and training on waste segregation should be provided to all members of the university community, including students, faculty, and staff. This includes information on what types of waste can be segregated, how to segregate waste properly, and the importance of waste segregation for sustainability.

**Bin Placement:** Adequate waste bins should be placed throughout the university, with clear signage indicating which types of waste should be placed in each bin. Color coding can also be used to help with waste segregation. For example, blue bins can be used for paper and cardboard, green bins for organic waste, and yellow bins for plastic and metal.

**Collection and Transport:** Proper collection and transport of segregated waste materials is important to ensure they are properly disposed of or recycled. Separate collection vehicles can be used for each type of waste material to ensure that they are not mixed together during transport.

**Recycling Infrastructure:** The university should have adequate recycling infrastructure to recycle segregated waste materials properly. This includes recycling facilities for paper, plastic, metal, and other recyclable materials.

By implementing waste segregation in a university, the campus can significantly reduce the amount of waste in landfills, promote sustainability, and save resources by recycling materials that would otherwise be discarded.





## SUSTAINABLE RESOURCES UTILIZATION



### 1. Waste Segregation

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The college has implemented an effective waste segregation system, categorizing waste into recyclables, compostables, and non-recyclables to ensure proper disposal and recycling.

Color-coded bins are placed throughout the campus to facilitate waste segregation. Educational campaigns encourage students and staff to sort waste correctly, supporting SSJB College's recycling and composting programs.





## SUSTAINABLE RESOURCES UTILIZATION



### 2. Organic Waste Management

Organic waste management in a university involves properly handling, treating, and disposing of food waste and other organic materials generated on campus. Organic waste management tips for the university:

**Source Separation:** One of the critical components of organic waste management is source separation. This involves separating food waste and other organic materials from waste streams such as paper, plastics, and metals. The university should provide separate bins for organic waste in high-traffic areas such as dining halls and kitchens.

**Composting:** Composting is a natural process where microorganisms break down organic materials to create nutrient-rich soil. Composting can be a cost-effective and sustainable way to manage organic waste on campus. The university can establish on-site composting facilities or work with local composting facilities to process organic waste.

**Anaerobic Digestion:** Anaerobic digestion is another method for managing organic waste that involves using microorganisms without oxygen to break down organic material. This process can produce biogas, which can be used to generate energy.

**Education and Outreach:** Proper education and outreach are crucial to the success of organic waste management programs in universities. The university should provide information on the importance of organic waste management, how to correctly separate organic waste, and how to participate in composting programs.

By implementing organic waste management in a university, the campus can significantly reduce the amount of organic waste in landfills, promote sustainability, and create valuable resources such as compost and biogas.





**SUSTAINABLE RESOURCES UTILIZATION**



**2. Organic Waste Management**

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SSJB College manages organic waste through composting, turning food scraps and garden waste into nutrient-rich compost used for campus landscaping.

Composting bins collect organic waste in cafeterias and garden areas. The resulting compost is used to fertilize plants on campus, creating a closed-loop system that reduces waste and enhances soil health.







## SUSTAINABLE RESOURCES UTILIZATION



### 3. Greening Education Policy

A greening education policy can provide a roadmap for universities to reduce their environmental impact and promote sustainability on campus while also creating a culture of environmental stewardship among students, faculty, staff, and other stakeholders. A "Greening Education" policy for a university may include the following elements:

**Curriculum Integration:** The policy should promote the integration of sustainability principles and practices into all aspects of the university's academic programs, including general education requirements, majors, and graduate programs.

**Professional Development:** The policy should provide opportunities for faculty and staff to learn about sustainability principles and practices and how to integrate them into their teaching, research, and operations.

**Campus Operations:** The policy should encourage the university to adopt sustainable practices, such as green building design and construction, energy and water conservation, waste reduction and recycling, sustainable transportation, and the use of renewable energy sources.

**Research and Scholarship:** The policy should encourage and support research and scholarship that advances sustainability science and addresses pressing environmental, social, and economic challenges.

**Community Engagement:** The policy should encourage the university to engage with its local and global communities to promote sustainability, such as through outreach and education programs, community gardens, and sustainability-focused events and initiatives.

**Partnerships and Collaboration:** The policy should encourage partnerships and collaboration with other universities, government agencies, and private sector organizations to advance sustainability efforts and share best practices.

**Monitoring and Reporting:** The policy should establish a system for monitoring and reporting on the university's progress in achieving its sustainability goals and regularly reporting on its performance to stakeholders.

A greening education policy can provide a framework for universities to integrate sustainability principles and practices into all aspects of their operations, research, and education, promoting environmental stewardship, social responsibility, and economic viability for future generations.







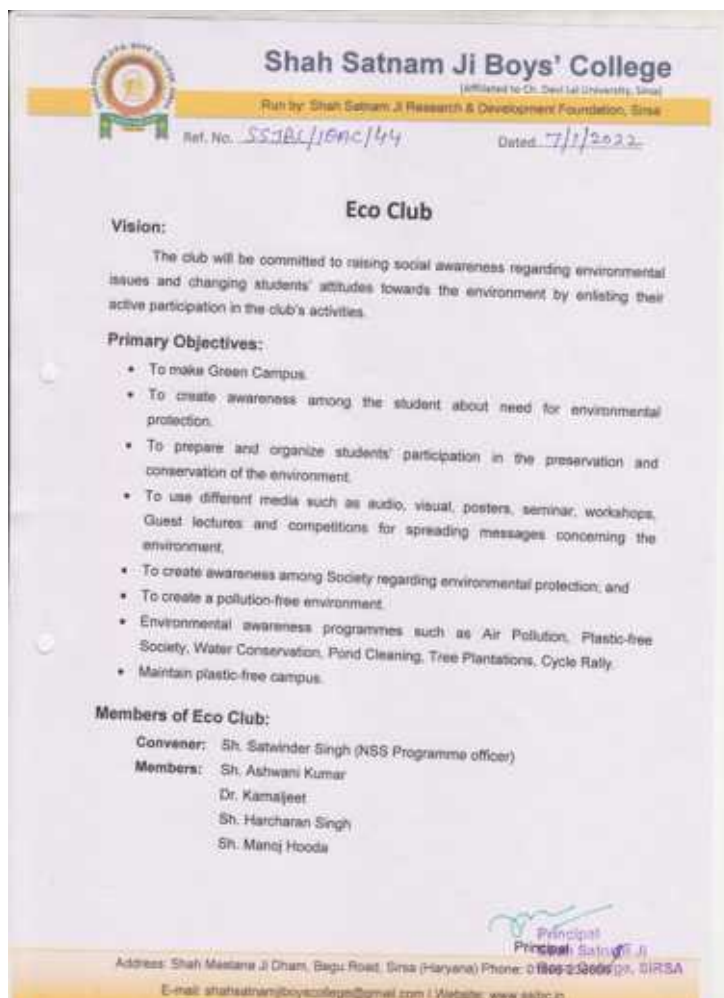
## SUSTAINABLE RESOURCES UTILIZATION



### 3. Greening Education Policy

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The college has established a comprehensive green policy that outlines its commitment to sustainability, covering areas like energy use, waste management, water conservation, and environmental education.





## SUSTAINABLE RESOURCES UTILIZATION



### 4. Salvaged Materials

The use of salvaged materials in universities can contribute to sustainable and environmentally responsible construction practices. Salvaged materials are typically reclaimed or reused from existing structures or buildings rather than being newly produced and can include items such as reclaimed wood, repurposed metal, or refurbished fixtures.

Incorporating salvaged materials into university construction projects can offer several benefits, including reducing the demand for new materials and the associated energy and resources required for their production. It can also reduce the amount of waste sent to landfills and provide unique and characterful design elements that contribute to a sense of history and place.

However, when incorporating salvaged materials into university projects, it is important to ensure that they are of high quality and suitable for their intended use. It is also important to work with experienced professionals who are knowledgeable about salvaged materials and their appropriate applications. Additionally, proper documentation and tracking of salvaged materials can help ensure that they are sourced ethically and that their environmental benefits are accurately accounted for. Overall, the use of salvaged materials in universities can help to promote sustainable and environmentally responsible construction practices.





## SUSTAINABLE RESOURCES UTILIZATION



### 4. Salvaged Materials

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SSJB College incorporates salvaged materials in construction and renovation projects to reduce waste and promote sustainability. This includes repurposing materials from demolished buildings or surplus supplies.

Salvaged materials are used in building projects to minimize the need for new resources. This practice supports waste reduction, resource efficiency, and sustainable construction methods.





## SUSTAINABLE RESOURCES UTILIZATION



### 5. Eco-friendly Wood Based Materials

The use of eco-friendly wood-based materials in university construction can contribute to sustainable and environmentally responsible building practices.

Eco-friendly wood-based materials are typically made from sustainably sourced or recycled wood and often have a reduced environmental impact compared to traditional wood-based materials.

Examples of eco-friendly wood-based materials include bamboo, which is a rapidly renewable resource that can be used for flooring, furniture, and other applications.

Another example is reclaimed wood, which is salvaged from old buildings or structures and repurposed for use in new construction projects. Additionally, there are composite wood materials made from recycled wood fibers and plastics, which can be used for decking, cladding, and other applications.

Using eco-friendly wood-based materials in university construction can offer several benefits, including reducing the demand for new wood and the associated energy and resources required for their production. It can also reduce the amount of waste sent to landfills and promote sustainable forestry practices that protect the environment.

However, it is important to ensure that eco-friendly wood-based materials are of high quality and suitable for their intended use. It is also important to work with experienced professionals who are knowledgeable about eco-friendly materials and their appropriate applications.

Overall, the use of eco-friendly wood-based materials in universities can help to promote sustainable and environmentally responsible building practices while also creating a healthy and inspiring learning environment for students and staff.





## SUSTAINABLE RESOURCES UTILIZATION



### 5. Eco-friendly Wood Based Materials

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The college uses eco-friendly, certified wood-based materials in its construction and furniture, ensuring that wood is sourced from sustainably managed forests.

Wood products at SSJB College are certified by organizations like the Forest Stewardship Council (FSC), ensuring they come from responsibly managed forests. This supports sustainable forestry practices and reduces environmental impact.





## SUSTAINABLE RESOURCES UTILIZATION



### 6. Materials with Recycled Content

The use of materials with recycled content is an important aspect of sustainability in university buildings. This includes materials such as recycled steel, glass, plastic, and concrete.

By using these materials, the demand for virgin materials is reduced, which helps to conserve natural resources and energy. In addition, using recycled materials can help to reduce the amount of waste that ends up in landfills.

There are several ways that universities can incorporate materials with recycled content into their buildings. One way is to specify these materials in construction contracts and to work with contractors and suppliers to ensure that they are used. Another way is to require that a certain percentage of materials used in construction and renovation projects are made from recycled content.

It's also important to note that not all materials with recycled content are created equal. The quality and environmental benefits of recycled materials can vary depending on factors such as the manufacturing process, the source of the recycled content, and the end-of-life disposal options for the material.

Therefore, it's important to carefully evaluate the environmental impact of different materials before selecting them for use in university buildings.







## SUSTAINABLE RESOURCES UTILIZATION



### 6. Materials with Recycled Content

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SSJB College prioritizes the use of materials with recycled content for its construction, maintenance, and operational needs. This practice reduces the demand for virgin resources and supports the recycling industry.

Recycled materials are used in a variety of applications, from building construction to office supplies. This commitment to recycled content helps reduce waste and promote a circular economy.





## SUSTAINABLE RESOURCES UTILIZATION



### 7. Local Materials

Using local materials in the construction and operation of universities can have several benefits, such as reducing transportation costs, supporting local economies, and promoting sustainable development. Some ways universities can use local materials include:

Using locally sourced construction materials such as stone, timber, and clay for building construction.

Using locally sourced materials for furniture, such as chairs, tables, and cabinets.

Using local plants and landscaping materials for creating green spaces.

Using locally sourced materials for equipment, such as computers and office supplies.

By using local materials, universities can reduce their carbon footprint and promote sustainability in their communities. Additionally, it can also help to create a sense of identity and community by reflecting local culture and heritage in the design and construction of the university.





## SUSTAINABLE RESOURCES UTILIZATION



### 7. Local Materials

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The college prefers locally sourced materials for its projects to reduce transportation emissions and support the local economy. Using local materials also ensures that building practices align with regional sustainability standards.

Cumulative Score

48/70





**SUSTAINABLE RESOURCES UTILIZATION**

**SUSTAINABILITY EVALUATION CHART**

Sr. No.	Assessment Areas	Cumulative Score
1.	<b>GOVERNANCE &amp; ACADEMIC</b>	30/40
2.	<b>BUILDING DESIGN &amp; LANDSCAPING</b>	63/80
3.	<b>WATER MANAGEMENT PRACTICES</b>	57/80
4.	<b>AIR QUALITY LEVEL</b>	62/80
5.	<b>ENERGY USES &amp; SAVING PRACTICES</b>	57/80
6.	<b>HEALTH &amp; HYGIENE PRACTICES</b>	50/70
7.	<b>SUSTAINABLE RESOURCES UTILIZATION</b>	39/70
<b>Total</b>		<b>357/500</b>

**Certification Level**

<b>Rejection</b> 000-100 Points	<b>Certification</b> 100-200 Points	<b>Silver</b> 200-300 Points	<b>Gold</b> 300-400 Points	<b>Platinum</b> 400-500 Points





# GREEN MENTORS

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