

Environment Report



2021-2022

Prepared&Submitted by

Vision Infra Developer

Vision Infra Developer, LIG-950, Darpan Colony, Thatipur,
Gwalior (M.P.)

Submitted to

Internal Quality Assurance Cell

Govt. Kamla Raja Girls Post Graduate Autonomous College,

(Affiliated to Jiwaji University, Gwalior)

Kampoo, Gwalior (Madhya Pradesh) INDIA

Telephone : 0751- 2625495, 0751 – 2438173, Fax : 0751 – 2438173

e-mail :krgc@rediffmail.com Website : www.krgcgwalior.org

COMMITTEE FOR ENVIRONMENT

Dr. Charu Katare - Audit Coordinator

Dr. Anish Pandey - External Member

Shri Bhaskar Saxena - External Member (Water Audit)

Mr. Ashutosh Srivastava - External Member (Energy Audit)

Dr. Nisha Mishra - Member

Dr. Anand Kumar Singh - Member (Water Audit)

Dr. R.K. Mahour - Member (Biodiversity Audit)

Dr. Mohit Arya - Member (Biodiversity Audit)



Vision Infra Developer

Vision Infra Developer, LIG-950, Darpan Colony, Thatipur,
Gwalior (M.P.)

Environment Report

Certificate

This is to certify that Govt. Kamla Raja Girls Post Graduate Autonomous College, Gwalior has successfully undergone Green/Environment Audit in the month of March-April 2022 to assess green initiatives planning and efforts carried out in the campus to maintain a sustainable environment to the stakeholders was found to be excellent.

This Audit conducted by agency review of papered documents and records, visual tour of college campus along with personal and telephonic interviews of faculty, non-teaching staff and students.

Certificate will be valid till 30 April, 2023.



Certificate No. GEA/2022/101
20 April 2023

Mr. Ashutosh Shrivastava
Audit Officer

INDEX

Contents

Environment.....	1
Introduction-	1
Objective	2
The main Objectives-	2
Significance of the Environmenting	2
Glimpse to KRG Institute	4
Geographical Position & Area:	5
Courses Offered by Institute:-.....	9
Details of plantation:	17
Perennial Shrubs	20
List of butterflies.....	22
Insect Fauna Of The Campus.....	23
List of bird Species :	25
Institutional Activities:.....	26
Clean campus	27
NCC Activities:.....	29
Day light Design (Condition) and Ventilation	30
Energy use and conservation	31
Energy conservation –.....	31
Energy consumption during 2021-22.....	32
Water Resources- Harvesting and Management	33
E-waste Management –	38
Solid Waste Management -	38
Hazardous waste management –	39
Green Belt/ Land Scaping -	40
Carbon Footprints:	41
Carbon footprint by measuring Carbon dioxide level in the Campus:.....	41
Air Quality Data for Institution:.....	42

Efforts for carbon neutrality –.....	43
Green Initiatives.....	43
Health and Hygiene.....	52
Recommendations/ Suggestions:-	55
Conclusion:	56
Green Audit Checklist:	57

Environment

Introduction-

Environment is a useful tool for a college or institute to determine when and where they are using the most energy and resources and they can consider how to enforce changes and conserve resources. The term Environment and environmental audit mean differently to different people. Environmenting is a systematic assessment of day to day activity with reference to the utilization of resources and waste management.

Environment is a process of systematic identification, reordering, reporting and analysis of components of environmental diversity of institute. It aims to analyze environmental practices within and outside of the concerned place, which will have an impact on the Eco-friendly atmosphere. Environment is a valuable means for a college to determine how and where they are using the most energy or water or other resources. It can create health consciousness and promote environmental awareness, value and ethics. Thus it is imperative that the college evaluate its own contributions toward a sustainable future as environmental sustainability is becoming an increasingly important issue for the nation. The role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at local, regional and global level has led to several environment and ecological crises. With this background it becomes essential to adopt the system of the green campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmosphere CO_2 from the environment. The National assessment and accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational institutions should submit an annual Environment report. Moreover, it is part of corporate social responsibility of the higher educational institution to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures. We need a clean environment so we can live healthy lives and leave future generations a healthy earth. But today in the name of technology and development human beings are creating a lot of damage to the environment. The only way to achieve a clean environment is that everyone works together to take awareness about the fragility of our environment and the importance of its

protection. Promoting environmental awareness is an easy way to create a brighter future. The young generation of today should be educated to respect protect and preserve the nature.

Objective

The main objective of the Environment is to promote the environment management and conservation in the campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of environment sustainability in compliance with the applicable regulation, policies and standards.

In recent time the Environment of an Institution has been becoming a paramount important for self- assessment of the institution which reflects the role of the Institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception.

The main Objectives-

1. To map the Geographical location of the college.
2. Initiatives for water and energy conservation.
3. To study waste minimization and safe disposal of waste particularly hazardous wastes.
4. To report the expenditure on green initiatives during last five year.
5. To promote the concept of environmental conservation so as to minimize the extent of exploitation of resource use inside the campus.
6. To inculcate awareness among the students to real concerns of environment and its sustainability.
7. To ensure that the development of the campus foster to the concept of environmental sustainability and green campus.
8. To suggest sustainable energy usage and water conservation practices.
9. To find out various sources of organic and solid waste generation and mitigation possibilities.

Significance of the Environmenting

Environment is used to avoid the interruptions in environment due to human activities. Monitoring Environment helps to improve the human activities with the objective of reducing adverse effect on environment, suggest the best protocol for environmental awareness to

maintain the sustainability for green earth and suggest the position of water management, waste management status of college campus. It also guide about air quality status of our college campus and Environment also suggest the availability, use and control measures for the use of electric energy.

1. More efficient resource management.
2. To provide basis for improved sustainability.
3. To create a Green campus.
4. To enable waste management through reduction of waste generation, solid waste and water recycling.
5. To create plastic free campus and evolve health consciousness among the stakeholders.
6. Recognize the cost saving methods through waste minimizing and managing.
7. Authenticate conformity with the implemented laws.
8. Empower the organizations to frame a better environmental performance.
9. Impart environmental education through systematic environmental management approach and improving environmental standards.
10. Bench marking for environmental protection initiatives.
11. Financial savings through a reduction in resource use.
12. Developing an environmental ethic and values systems in youngsters.
13. Environmenting should become a valuable tool in the management and monitoring of environmental and sustainable development programs the college.
14. It would help to protect the surroundings environment.
15. It empowers the institutions to give a better shape to environmental performance.

Environmenting of resources use It gives an opportunity for the development of ownership personal and social responsibility for the student and teachers. Thus it is imperative that the college evaluate its own contributions towards a sustainable future.

Glimpse to KRG Institute

Government Govt. Kamla Raja Girls Post Graduate (Autonomous) College is conveniently situated in a prominent location of south-west Gwalior and having a sprawling campus. Established in 1937 A.D., the college occupies a prominent place and has wide reputation among the institutes of higher education not only in the state of Madhya Pradesh but also in other states of Northern India, because of the academic achievements, the infrastructural properties and the financial richness of the college. The college is affiliated to Jiwaji University, Gwalior and recognized by UGC under section 2(f) and 12(b) of the Act, 1956.

In recognition of its significant achievements, the UGC and the state government granted autonomy to the college in 1996. As an Autonomous college, it has created many opportunities inside for the inclusion of new courses apart from the courses which have already been regularized by the Govt. of Madhya Pradesh. Apart from a good amount of financial aid from the University Grants Commission, New Delhi, it receives rupees twenty lacs as autonomous grants each year for the expenses of Autonomy. The National Assessment and Accreditation Commission awarded the college 'B' grade in 2004 and 2010, and in 2016 it is reaccredited with the grade 'A'.

The college aims to facilitate and promote studies; research and extension work in the emerging area of higher education with the expansion of women education. It offers courses in disciplines of Arts, Social Science, Commerce, Management, Computer Science, Life Sciences, Physical Science, Home Science and law. Presently the student strength is nearly ten thousand and 232 research scholars are doing research work in various disciplines. The college has a phenomenal range of 112 qualified regular and 59 guest faculty members. Besides, Commerce and Home Science faculty, seventeen undergraduate departments under the faculty of Arts and seven Science departments under the faculty of Science, offer various courses. Twenty departments offer twenty three master's degrees and one Post Graduate Diploma course. It is the only institution in this region where Urdu language is taught at the Post Graduate level. The college has a marvelous central library, computer labs, sports wing and a canteen to cater the needs of college family. The units of N.S.S. and N.C.C. of this college organize popular lectures on health and hygiene programs, social work, AIDS awareness, moral education and women empowerment in collaboration with NGO's in the area.

Strengthened by the benefits of Autonomy and commendably supported by the Janbhagidari

Samiti, the college has expended its resources productively and has ensured their optimal use. By the well planned and well-thought schemes of the Principal, the College has expanded some new blocks for the studies of Job-Oriented courses such as B.B.A, P.G.D.C.A., B.A.L.L.B. (Honor's), B.C.A. and a few others. Apart from 23 regular departments a few departments such as Computer Science, Management, Bio-technology and Law have been expanded recently. Besides regular courses subjects like Micro-biology, Bioinformatics, Industrial Chemistry and Electronics are run under self-finance scheme in the science faculty.

Short Term Certificate Courses have been introduced by the college since 2016 to provide students additional vocational skills along with the regular degree courses offered. The college has also adopted a comprehensive view to develop professionalism. At the time of admissions a special counseling cell is set up for giving proper guidance to students in the right selection of subjects and combinations.

Many of the faculty members have attended national and international seminars and published their papers in national, international refereed journals and anthologies. They have also published reference and text books. The alumni of the College occupy distinguished positions in almost all spheres of society, government, bureaucracy, banking, finance, academics, business, politics, journalism and media. Many are successfully managing their own business establishments and doing social work. Our students have been performing remarkably well in all spheres of life. A large number of our students get selected by national and multinational companies through campus interviews.

It has been a long journey through the eighty years and yet the journey has perhaps just begun. However, the college continuously spread its wings to onwards march in scaling the new heights for pursuing the progress of women higher education

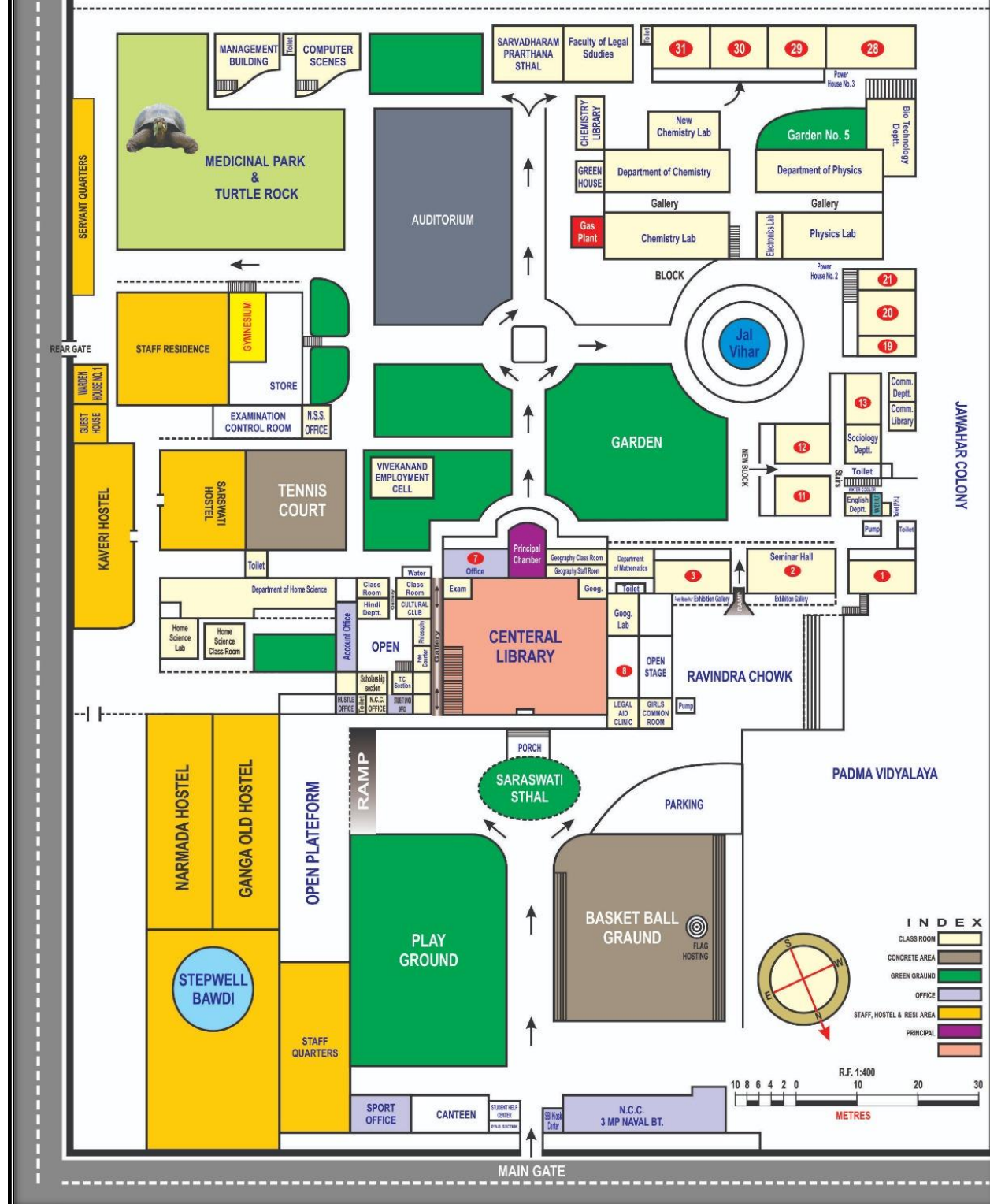
Geographical Position & Area:

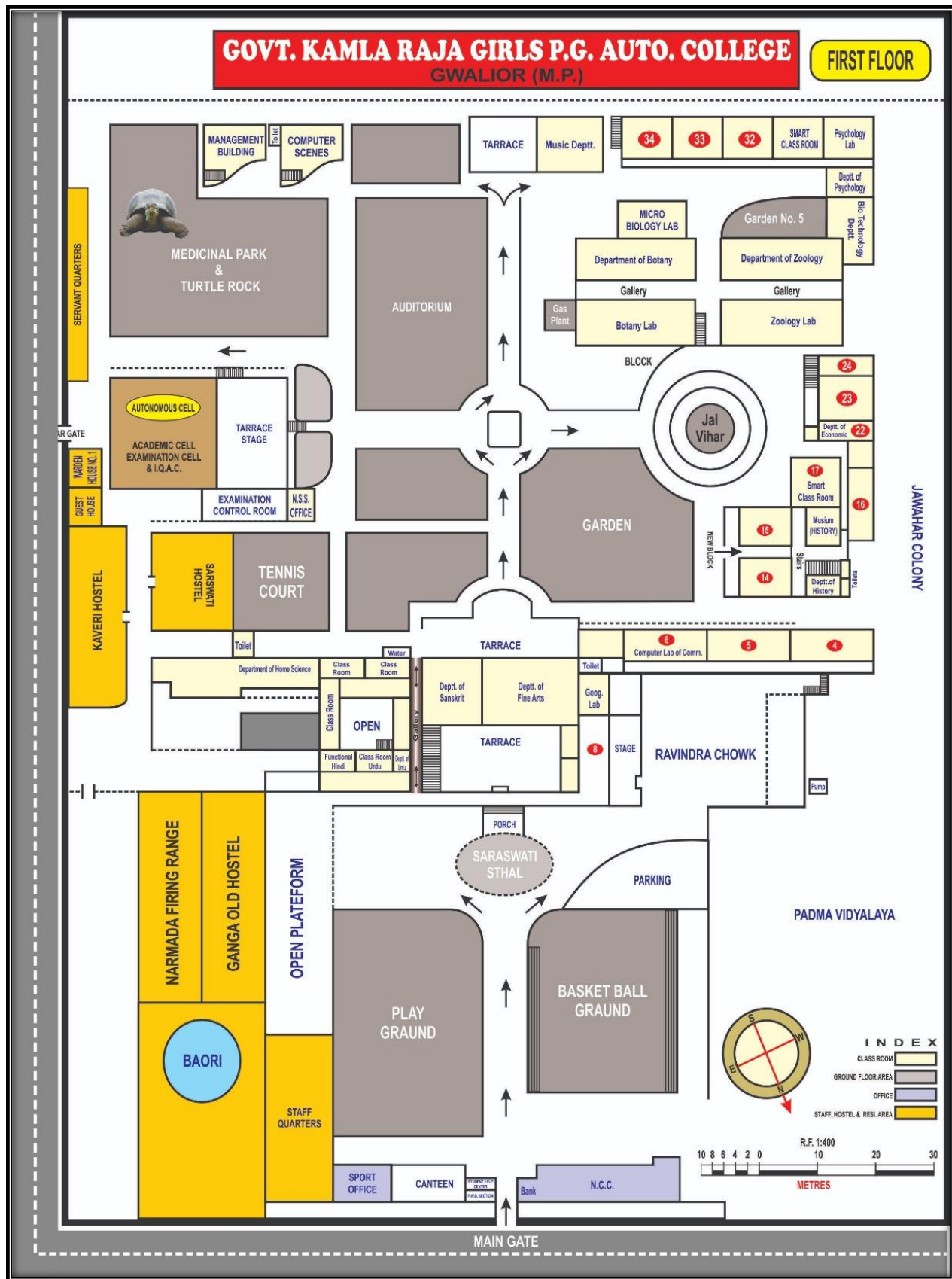
Latitude	-	26.1920° N
Longitude	-	78.1545° E
Area in Sq. Feet	-	578179.1425
Area in Sq. M.	-	53714.60
Area in Acre	-	13.2734
Area in Hectare	-	5.37146

% of Constructed Area	-	60%
Constructed Area in Sq. M.	-	32228.40
Constructed Area in Sq. Feet	-	346907.40
% of Open Area	-	40%
Open Area in Sq. M.	-	21485.60
Open Area in Sq. Feet	-	231271.657
Infrastructure	-	15 Blocks
Rooms	-	More than 100 well furnished rooms



GROUND FLOOR





Courses Offered by Institute:-

(A) Regular UG Courses

(1) Bachelor of Arts: -

- URDU
- ENGLISH
- HINDI
- SANSKRIT
- POLITICAL SCIENCE
- SOCIOLOGY
- HISTORY
- ECONOMICS
- GEOGRAPHY
- PHILOSOPHY
- PSYCHOLOGY
- DRAWING & PAINTING
- MUSIC VOCAL
- MUSIC INSTRUMENT
- MUSIC DANCE

(2) Bachelor of Commerce

- COMMERCE

(3) Bachelor of Science

- MATHEMATICS
- PHYSICS
- CHEMISTRY
- BOTANY
- ZOOLOGY

(4) Bachelor of Home Science

UG Courses under Self Finance Scheme

B.A. - FUNCTIONAL HINDI

B.COM. - COMPUTER

B.SC.	-	COMPUTER SCIENCE
B.SC.	-	ELECTRONICS
B.SC.	-	INDUSTRIAL CHEMISTRY
B.SC.	-	MICROBIOLOGY
B.SC.	-	BIOTECHNOLOGY
B.SC.	-	BIOINFORMATICS
B.C.A.	-	COMPUTER APPLICATION
B.B.A.	-	BUSINESS ADMINISTRATION

Regular PG Courses

(1) Master of Arts

- URDU
- ENGLISH
- HINDI
- SANSKRIT
- POLITICAL SCIENCE
- SOCIOLOGY
- HISTORY
- ECONOMICS
- GEOGRAPHY
- PHILSOPHY
- DRAWING & PAINTING
- MUSIC VOCAL
- MUSIC INSTRUMENT

(2) Master of Commerce

(3) Master of Science

- MATHEMATICS
- PHYSICS
- CHEMISTRY
- BOTANY
- ZOOLOGY

- HOME SCIENCE
- FOOD & NUTRITION
- HUMAN DEVELOPMENT
- RESOURCE MANAGEMENT

Research Degree Program

(1) Ph.D.

- URDU
- ENGLISH
- HINDI
- SANSKRIT
- POLITICAL SCIENCE
- SOCIOLOGY
- HISTORY
- ECONOMICS
- GEOGRAPHY
- PHILOSOPHY
- DRAWING & PAINTING
- MUSIC
- COMMERCE
- CHEMISTRY
- ZOOLOGY
- HOME SCIENCE
- MATHEMATICS

PG Courses under Self Finance Scheme

(1) Master of Science

- Biotechnology

Integrated UG Courses

- (1) B.A.LL.B. - Arts + Law

PG Diploma Courses

(1) PGDCA - Post Graduate Diploma in Computer Application

Short Term Certificate Courses under Atmnirbhar Madhya Pradesh

1. 6 months Certificate course in Travels and Tourism Management.
2. 6 months Certificate course in Food Processing, Food Techniques and Microbiology
3. 6 months Certificate course in English Communication Skills
4. 6 months Certificate course in Jyotishastra.
5. 6 months Certificate course in Pisciculture.
6. 6 months Certificate course in Tally.
7. 6 months Certificate course in Cruelty and Domestic Violence.
8. 6 months Certificate course in Arambhika se Swaranjali tak.

Pool of Short Term Certificate Courses

1. 6 months Certificate course in Travels and Tourism Management.
2. 6 months Certificate course in Concepts and applications of Bioinformatics.
3. 6 months Certificate course in Food Processing and Food Techniques.
4. 6 months Certificate course in Plant Tissue Culture.
5. 6 months Certificate course in Dance and Instrumental performance.
6. 6 months Certificate course in Folk Music.
7. 6 months Geetanjali Certificate course in vocal music
8. 6 months Certificate course in English Communication
9. 6 months Certificate course in Jyotishastra.
10. 6 months Certificate course in Vastushastra.
11. 6 months Certificate course in Mobile Training
12. 6 months Certificate course in Taalim-e-Urdu Juban
13. 3 months Certificate course in Event Management.
14. 3 months Certificate course in Basics of Statistics
15. 3 months Certificate course in Wild Life Conservation and its role in Tourism
16. 2 months Certificate course in Tour Operators and Travel Agency
17. 2 months Certificate course in Tourist Product Management
18. 2 months Certificate course in hospitality
19. 2 months Certificate course in Sculpture and Folk toys
20. 2 months Certificate course in Remote Sensing

21. 2 months Certificate course in Soil and Water analysis Management
22. 2 months Certificate course in Bit coin and Crypto currencies
23. 1 months Certificate course in Techniques in Biotechnology
24. 1 months Certificate course in Tourism Guide Training
25. 1 months Certificate course in Sanskrit Sambhashan
26. 1 months Certificate course in Soft Toys
27. 1 months Certificate course in Baking and Pastry Arts
28. 1 months Certificate course in Herbarium Techniques

Environment

Environment in institution has become a paramount for the self-assessment of any institution. This helps in solving many of the environmental problems within college. It is a way to determine the adequate use of resources by various sustainability planning process. And creates environmental & health awareness ethics and values .Thus it gives its contribution towards a sustainable environment.

College conducts internal Environment since 2013 and makes various efforts like to maintain eco-friendly atmosphere in the campus, to maintain eco-friendly ambience and to promote green campus by initiating programs like know green and think green is promoted for the current Environment we mainly focused on following

14 major areas covering an extremely wide range of environmental impact are as:

1. Green Campus
2. Clean Campus
3. Good Daylight Design and Ventilation
4. Water efficiency
5. Water Harvesting
6. Waste water management
7. Paper waste management
8. E- waste management
9. Canteen and solid waste management
10. Hazardous waste management
11. Green Belt/Lands coping
12. Green Program (Green initiative)
13. Universal access and Efficient operation and maintenance of building
14. Health and hygiene

Green Campus

It is a lush green campus trees planted along the building and boundary. Ample numbers of trees are planted every year by staff and students. Plants of 15to20 years average life. Some of the

plants spread over the campus are as old as institute one of the way through which green and clean campus is accomplished in the college is by plantation awareness for plantation is spread among students through department and Eco-club activities by plantation of saplings plantation was carried out in the campus and off the campus. Training on bonsai making and hydroponics encourages students to use the available space efficiently to grow plants.

Educational institutes can make broad impact on the world around them .These are in unique position to be leaders in pursuing environmentally sustainable solution. Govt. K.R.G.P.G. College expresses its commitment of sustainability in many ways. Its college campus 13 acres and has lush green environment from the entrance there is a well –laid tar good connecting all the blocks in the campus .The front –view garden, beautiful blossoms ,green fencing plants, basketball court surrounded by shady trees with the statue of God Saraswati contribute to the pleasant and serene ambience of the college the college campus is an important landmark in the city chiefly because of its architecture of Scindia apnasty and greenery it provides a feast to the eyes the hind and soul of and visitor it is so enchanting that student don't leave the campus even after their classes they love sitting in the laws chatting .with their friends reading books writing assignments holding group discussions college has taken a number of positive steps to improve its environment quantity our college campus is immensely diverse with variety of tree species performing variety of functions trees are planted in different periods of time through various plantation programs organized by college committee the trees have become an integral part of the college campus and contributing to the overall environment by providing Oxygen /improving air quality reducing noise pollution moderating the effects of wind rain and sun. Many species of birds can be found around these trees for nectar of flowers and plants. We are emotionally connected to these large shady trees which keep the environment safe from wind dus and storms. Celebrate every year 5th June Environment day and plant trees on this day to make the campus more Green.



Details of plantation:**List of Trees and Plant species and their numbers**

S. No.	Common Name	Name in Hindi	Botanical Name	No. of Individuals
1.	Bargad	बरगद	<i>Ficus bengalensis</i>	6
2.	Peepal	पीपल	<i>Ficus religiosa</i>	5
3.	Gular	गूलर	<i>Ficus racemosa</i>	3
4.	Rubber tree	रबर का पेड़	<i>Ficus elastic</i>	2
5.	Indian Laurel	भारतीय लॉरेल	<i>Ficus microcarpa</i>	3
6.	Pakhad	पाखाड़	<i>Ficus virens</i>	2
7.	Bel	बेल	<i>Aegle marmelos</i>	3
8.	Neem	नीम	<i>Azadirachta indica</i>	15
9.	Kachnar	कचनार	<i>Bauhinia variegata</i>	2
10.	Palas	पलाश	<i>Butea monosperma</i>	2
11.	Amaltas	अमलतास	<i>Cassia fistula</i>	3
12.	Pawar	पमार	<i>Cassia tora</i>	2
13.	Shisham	शीशम	<i>Dalbergia latifolia</i>	4
14.	Asok	अशोक	<i>Polyalthia longifolia</i>	45
15.	Arjun	अर्जुन	<i>Terminalia arjuna</i>	3
16.	Sagon or Teak	सागौन या सागौन	<i>Tectona grandis</i>	8
17.	Karonda	करोँदा	<i>Carissa carandas</i>	2
18.	Kadamb	कदम्ब	<i>Anthocephalus kadamba</i>	2
19.	Aam	आम	<i>Mangifera indica</i>	5
20.	Jamun	जामुन	<i>Syzygiumcumini</i>	4
21.	Amla	आंवला	<i>Emblica officinalis</i>	7

22.	Imli	इमली	<i>Tamarindus indica</i>	3
23.	Kathel	कठहल	<i>Artocarpus heterophyllus</i>	3
24.	Sitaphal	सीताफल	<i>Anona squamosa</i>	2
25.	Amrood	अमरूद	<i>Psidium Guava</i>	8
26.	Shahtoot	शहतूत	<i>Morus alba</i>	3
27.	Neebu	नीबू	<i>Citrussynensis</i>	5
28.	Anaar	अनार	<i>Punica granatum</i>	3
29.	Kela	केला	<i>Musapardisiaca</i>	5
30.	Papeeta	पपीता	<i>Carica papaya</i>	2
31.	Sahjna	सहजना	<i>Moringa oleifera</i>	5
32.	Chiku	चीकू	<i>Manilkara zapota</i>	1
33.	Bottle Brush	बोटलब्रश	<i>Callistemon citrinus</i>	3
34.	Gulmohar	गुलमोहर	<i>Delonix regia</i>	2
35.	Peele Gulmohar	पीलीगुलमोहर	<i>Peltophorumpterocarpum</i>	2
36.	Nili Gulmohar or Jacaranda	नीलीगुलमोहर या जकरंडा	<i>Jacaranda mimosifolia</i>	1
37.	Karanj	करंज	<i>Pongamia pinnata</i>	3
38.	Ber	बेर	<i>Zizyphusmauritiana</i>	2
39.	Yellow Oleander or Peela Kaner	पीलाओलियंडर या पीलाकनेर	<i>Cascabelathevetia</i>	4
40.	Indian Oleander or Kanher	भारतीय ओलियंडर या कन्हेर	<i>Nerium indicum</i>	6

41.	Gurhal	गुड़हल	<i>Hibiscus rosa sinensis</i>	8
42.	Harsinghar	हरसिंगार	<i>Nyctanthes arbortristis</i>	5
43.	Sawani	सावनी	<i>Lagerstroemia indica</i>	10
44.	Chandini	चांदनी	<i>Tabernaemontana diva ricata</i>	6
45.	Kaitha	कैथा	<i>Feronia limnonia</i>	1
46.	Mithanim	मीठानीम	<i>Murrayakoenigil</i>	3
47.	Vidya or Mor- pankhi	विद्या या मोर-पंखी	<i>Thuja occidentalis</i>	16
48.	Champa	चंपा	<i>Plumeria alba</i>	4
49.	Palm tree	खजूर का पेड़	<i>Roystonea regia</i>	32
50.	Fan Palm	फैनपाम	<i>Livistona chinensis</i>	28
51.	Madhukamini	मधुकामिनी	<i>Murrayapaniculata</i>	30
52.	Bhant	भांट	<i>Clerodendrum infortun atum</i>	2
53.	Rugmini	रगमिनी	<i>Ixora coccinea</i>	5
54.	Cycus	साइकस	<i>Cycuscercinalis</i>	8
55.	Toon	तून	<i>Toona ciliata</i>	2
56.	Maulshree	मौलश्री	<i>Minusopselengi</i>	10
57.	Kassod	कसौद	<i>Senna siamea</i>	1
58.	Bakayan Tree	बकायन का पेड़	<i>Melia azedarach</i>	1
59.	<i>Dracaena</i>	ड्राकिना	<i>Dracaena Janet Craig</i>	8
60.	<i>Dracaena</i>	ड्राकिनाविक्टोरिया	<i>Dracaena Victoria</i>	25

Perennial Shrubs

Sl. No.	Local name	Botanical name
1.	Tulsi	Ocimum Santalum
2.	Rose	Rosaceae
3.	Yellow Kaner	Thevetia Nerifalium
4.	Lal Kaner	Nerium Indicum
5.	Jason	Hibiscus Rosa Sinensis
6.	Jasmine	Jasminum Sp.
7.	Harsingar	Nyctanthes Arbour Tritis
8.	Garden Croton	Eroton Bonaplandium
9.	Gwar Patha	Aloe Sp.
10.	Cactus	Opuntia Sp.
11.	Sanke Plant	Sansevicria Speies
12.	Mehandi	Cleraden dronSp
13.	Coleus	Solenostemon Scutellaroides
14.	Sarp Gandha	Rauwolfia Serpentine
15.	Marigold	Tagetes Ereeta
16.	Petunia	Petunia Sp.
17.	Poinsettia	Euphorbia Pulcherina
18.	Sada Subagan	Catharanthus Roseus
19.	Canna Lily	Canna Generalis
20.	Dahlia	Dahlia Sp.
21.	Calen Dula	Calendulasp
22.	Gardan Poppy	Papaver Somniferum
23.	Sunflower	Helianthus Annus
24.	Hallyhock	Alcea Resra
25.	Blue Sage	Salvia Farinacea
26.	Pansy	Viola Tricolor
27.	Candy Tuft	Iberis Amare
28.	Phlox	Phlox Sp.

29.	Petunia	Petunia Sp.
30.	Zinnia	Zinnia Elegans
31.	Ver Beha	Verbena Sp.
32.	Golden Shower	Bignonia Venesta
33.	Money Plant	Pothos Sp.
34.	Satawar	Asparagus Resimosus
35.	Aparajita	ClitoriaTernatca
36.	Madhu Malti	Combrectum Indicum
37.	Wax Begonia	Begonia Simper Florens
38.	Kadam	Mitragynaparvifolia
39.	Fountain Brush	Russelia
40.	Gandhraj	Gardeniagumnifera
41.	Marodphalli	Haplophragma Adenophylium
42.	Goldendewdrop	Duranta Repens
43.	Kamini	Murraya Paniculata
44.	Teak	Tectona Grandis
45.	Raumini	Lxora Coccinea
46.	Saoni	Lagerstroenia Indica
47.	Fanplam	Livistona Chinensis
48.	Bottle Brush	Callistemoncitrus
49.	Niligulmohar	Jacaranda Mimosifolia
50.	Peelagumohar	Pettophsrump teracarpum
51.	Bhant	Cleroden Drum Viscosum
52.	Cycas	Cycascercinalis
53.	Toontree	Toona Ciliata
54.	Maulshree	Mimusopselengi

List of butterflies

S. No	Family	Scientific Name	Common Name
1.	Nymphalidae	<i>Danaus chrysippus</i>	Plain Tiger
		<i>Danaus genutia</i>	Striped Tiger
		<i>Junoniaalmana</i>	Peacock Pansy
		<i>Junoniaatlites</i>	Grey Pansy
		<i>Junoniahierta</i>	Yellow Pansy
		<i>Junoniaorithya</i>	Blue Pansy
		<i>Mycalesisperseus</i>	Common Bush brown
		<i>Ariadne merione</i>	Common Castor
		<i>Euploea core</i>	Common Crow
		<i>Melanitisleda</i>	Common evening brown
2.	Pieridae	<i>Euremahecabé</i>	Common Grass Yellow
		<i>Euremablanda</i>	Three-spot Grass Yellow
3.	Papillionidae	<i>Pachliopta hector</i>	Crimson Rose
		<i>Pachlioptaaristolochiae</i>	Common Rose
		<i>Papilio polytes</i>	Common Mormon
		<i>Papilio machaon</i>	Common Swallowtail

Insect Fauna Of The Campus

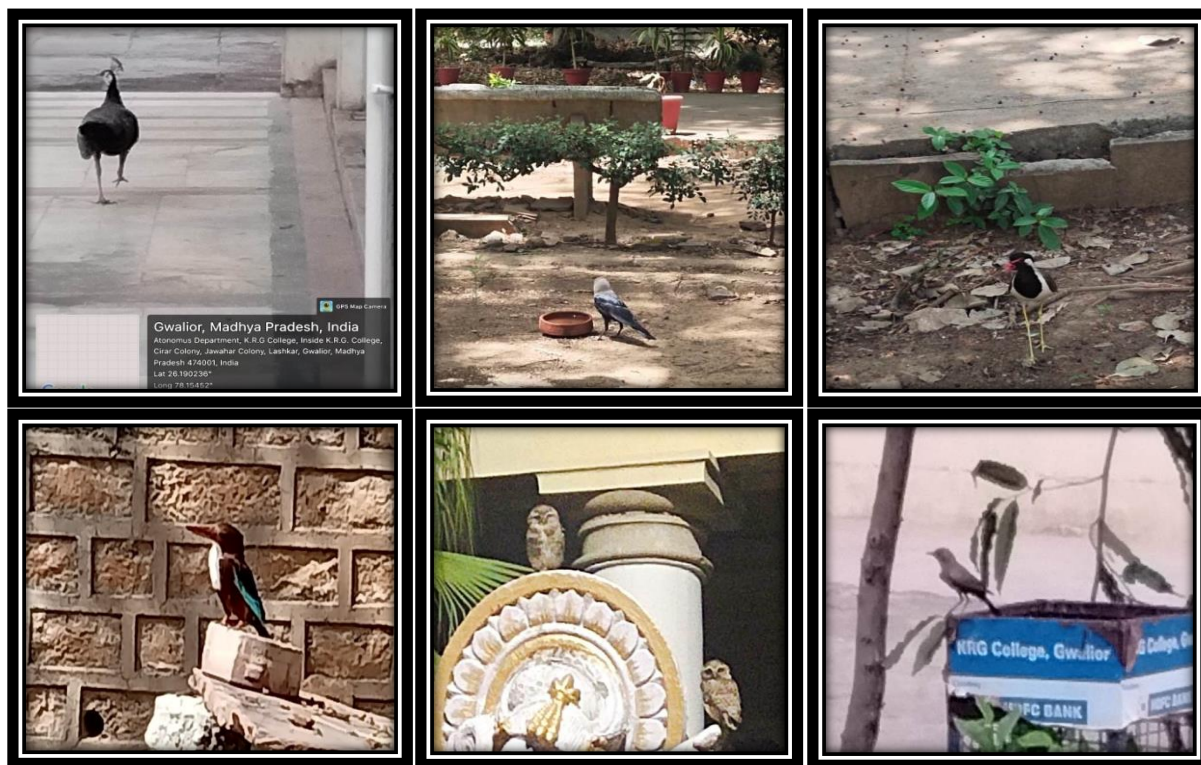
S. No.	English Name	Scientific Name	Hindi Name	
1.	Silverfish	<i>Lepisma</i>	Chamkeela Kida	चमकीलाकीड़ा
2.	Dragon Flies	<i>Agrarian</i>	Vyaghr Patanga	व्याघ्रपतंगा
3.	Damsel Flies	<i>Zygoptera</i>	Not available	—
4.	May Flies	<i>Taxonstand</i>	Alpayumakshika	अल्पायुमक्खी
5.	Cricket	<i>Gryllus</i>	Jheengur	झींगुर
6.	Locust	<i>Schistocera</i>	Tiddi	टिड्डी
7.	Grasshopper	<i>Romalea</i>	Tidda	टिड्डा
8.	Stick Insect	<i>Phasmatodea</i>	Chhadi Keet	छड़ीकीट
9.	Praying Mentis	<i>Mentis geligiosa</i>	HathjodKeeda	हथजोड़ कीड़ा
10.	Cockroach	<i>Periplaneta</i>	Tilchatta	तिलचट्टा
11.	White Ants	<i>Termites</i>	Deemak	डीमक
12.	Book Lice	<i>Liposcelis</i>	KitabiKeeda	किताबीकीड़ा
13.	Bed Bugs	<i>Cimex</i>	Khatmal	खटमल
13.	Dobson Flies	<i>Corydalidae</i>	Not available	—
14.	Moths	<i>Lepidoptera</i>	Patanga	पतंगा
15.	Butterflies	<i>Rhopalocera</i>	Titlee	शीर्षक
16.	House Fly	<i>Musca</i>	Makkhi	मक्खी
17.	Mosquitoes	<i>Anopheles Or Culex</i>	Machhar	मचहर
18.	Fruit Fly	<i>Drosophila</i>	Phal Ki Makkhi	फल की मक्खी
19.	Fleas	<i>Pulex</i>	Pissu	पिस्सू
20.	Honey Bee	<i>Apis</i>	Madhu Makkhi	मधुमक्खी
21.	Wasp	<i>Vespa</i>	Tataiya	ततैया
22.	Ants	<i>Formicidae</i>	Chinti	चिंटी
23.	Sawflies	<i>Symphyta</i>	Ara Makkhi	आरामक्खी

24.	Beetles	<i>Coleoptera</i>	Makoda	मकोडा
25.	Millipedes	<i>Julus</i>	Sahastrapad	सहस्रपाद
26.	Centipedes	<i>Scolopendra</i>	Kankhajura	कनखजूरा
27.	Leech	<i>Hirudinea</i>	Jonk	जोंक
28.	Lady Bird	<i>Coccinellidae</i>	Indragop	इंद्रगोप
29.	Termite	<i>Isoptera</i>	Deemak	दीमक
30.	Glow Worm	<i>Lampyris noctiluca</i>	Jugnu	जुगनू
31.	Spider	<i>Araneae</i>	Makdi	मकड़ी
32.	Scorpion	<i>Scorpiones</i>	Bichhoo	बिच्छू
33.	Caterpillar	<i>Lepidoptera</i>	Kamla	कमला



List of bird Species :

S. No.	Birds	Zoological Name
1.	Black Kite	Milvus migrans
2.	Shikra	Accipiter badius
3.	Black rumped Flameback	Dinopium benghalense
4.	Indian Grey Hornbill	Ocyeros birostris
5.	Brown headed Barbet	Megalaima zeylanica
6.	Copper smith Barbet	Megalaima haemacephala
7.	Asian Koel	Eudynamys scolopaceus
8.	House Crow	Corvus splendens
9.	Blue Rock Pigeon	Columba livia
10.	Eurasian collared Dove	Streptopelia decaocto
11.	Rose ringed Parakeet	Psittacula krameri
12.	Jungle Babbler	Turdoides striata
13.	Common Myna	Turdoides striata
14.	Red vented Bulbul	Pycnonotus cafer
15.	Oriental Magpie Robin	Copsychus saularis
16.	Common Tailor Bird	Orthotomus sutorius
17.	Oriental white Eye	Zosterops Palpebrosus
18.	Purple Sunbird	Cinnyris asiaticus
19.	House Sparrow	Passer domesticus



Institutional Activities:

Followings are the activities conducted in the institute to make the campus green and spread the message significance of plantation:

1. 05-June-2022 World environment Day was celebrated by College under which different awareness programs were performed like Nukkad Natak, Poster competition; motivational songs were sung on environment by student.
2. 04-July-2022 Hariyali Mahotsav was celebrated and Hariyali Sapath by Eco-club.
3. 29-Aug-2018 NSS unit organize plantation on campus in Hariyali Mahotsav.
4. On 15-Aug-2018 Independence day celebration organize environment rally and plantation drive and as a Chief Guest Pramila Bajpai (member of state women's commission) and Smt. Badhouriya (Janbhagidhari Samiti President).



Clean campus

A clean environment is essential to live a peaceful and healthy life. But our environment is getting unclean day by day because of the negligence of human beings it is an issue which every one must know about especially the youth. With this objective cleanliness drive is carried out in the campus. Efforts made by the institute to keep the campus and surrounding clean by organizing following programmes as follows-

1. On 2nd October on the day of Gandhi Jayanti every year a special cleanliness drive is carried on this day all the all staff members and student of institute take part in cleaning the campus. This drive is under taken to spread awareness among the students about the importance of cleanliness. Beside this the other activity carried on by the students in this regard are as follows-
2. The NSS unit of the college creates awareness among the students from time to time to keep the campus clear. It organized awareness rallies in the campus surrounding areas with the aim of creating awareness among the students and general public about the need and benefits of clean environment.
3. On 10-08-2017 a cleanliness rally was organized by the students of NSS at nearby Kamla raja hospital and the people over there were given information about the relationship between clean environment and health. Citizen by this the made aware about how cleanliness can help to prevent many diseases like typhoid, Diarrhea etc.
4. On 4-08-2018 the students of NSS demonstrated street play in the campus to create awareness among the students about cleanliness. 85 students participated.
5. On 21-08-2021 NSS Students removed carrot grass from the garden inside the campus. Carrot grass is very harmful for the human beings as well as for the environment.

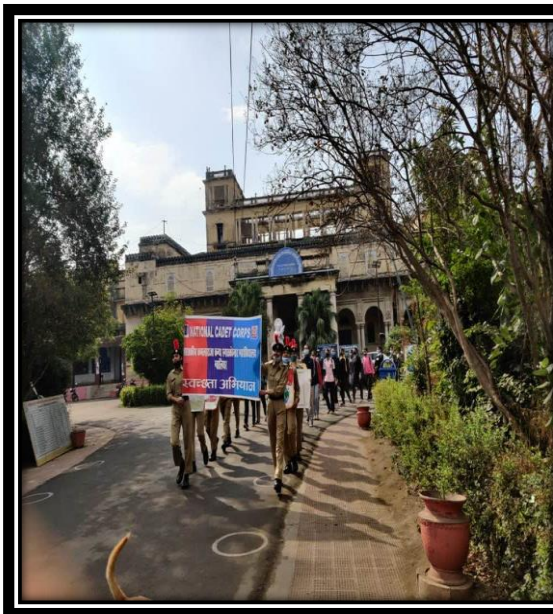




NCC Activities:

The NCC cadets of the college also indulge in cleanliness drive in the campus and around the surrounding areas.

1. From 18-09-2017 to 02-10-2017 under the action of Swachh Bharat Abhiyan NCC cadets cleaned the class rooms of the campus, during this period the cadets removed trash from the nearby Nehru Park also.
2. From 25-03-2022 to 31-03-2022 cleanliness week carried on by the NCC students cadets took oath organise the use of single use plastic and to minimize air and water pollution. Cadets organized a rally in the nearby market to educate the shopkeepers about the harmful effects of single use plastic, cadets distributed paper bags to the fruits and vegetable sellers and urged them to stop the use of plastic bags
3. 1-12-2021 to 15-12-2021 “Swachhta Pakhwada” under this week following activities by Eco-club & NSS unit organised like environment awareness rally, Essay writing poster making competition, online Quiz (clean & plastic free India Online webinar Etc.
4. NSS unit of college participated in cleanliness drive awareness program at God Gram Mahadji Nagar from 10.09.2018



Day light Design (Condition) and Ventilation

The college building is ventilated there are adequate amount of windows are provided on outer side of the room opening outside the building. Of the room opening outside the building there is no obstruction in front of windows. Door and ventilators are provided on the opposite wall opening in the corridor to provide proper cross ventilation. Each and every room is having adequate windows. The observation of day light taken in between 12 noon to 4pm on bright sunny day of April is more than 150 on lux meter.

- Classrooms, Labs and library have high ceiling with wide doors and large windows. Windows are kept open to adequate daylight.
- Classrooms and computer laboratories and parking space are well ventilated.
- Classroom walls, corridors and labs are white-washed this enhances the daylight received.
- Corridors are wide with good ceiling height. All the corridors receive good daylight.
- Laboratories are provided with exhaust fans to disperse heat, fumes and odors.



Energy use and conservation

This indicator addresses energy consumption, energy sources energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and this requires no explanation for its inclusion in the assessment.

1. Energy source utilized by the campus is electricity only.
2. The entire campus including common facility centres are equipped with LED lamps and LED tube lights, except at few location, computers are set to automatic power saving mode when not in use.
3. Solar lights panel is installed in campus.

Energy conservation –

Electricity supplied from the Madhya Pradesh electricity board is the main energy for the activities on the campus. In addition to the regular supply institute has its own 45 KVA Generator for power back-up. The institute also has **six ups** of 11 KV each and **12 Ups** of 3 KV each. Electricity is used for illuminating all the class rooms, ACS, consumption during 21-22 about 11708.17 k watt/month the energy consumption during 21-22 given below.

Electrical Energy consumption pattern in K.R.G College (Auto) Gwalior

Month	unit consumed (kW)
April -21	- 11661
May-21	- 11583
June-21	- 11615
July-21	- 11416
August-21	- 11393
Sept-21	- 10504
Oct-21	- 10861
Nov-21	- 9560
Dec-21	- 13994
Jan-22	- 13758
Feb-22	- 13216

March-22 - 12210

Average-22 - 11814.25 KW

Use of CFL bulbs in place conventional bulbs. Conservation of resources by the following ways is adopted.

- Reduce - Reuse - Recycle energy conservation minimum use of energy is the basis of energy conservation.
- Instructions have been pasted to reduce the wastage of electricity.
- Turning of lights/ bulbs and other appliances when not in use.
- All the class rooms are ad equality ventilated and well lighted.
- NSS, NCC Volunteers of Eco-club grouped other student and are instructed to switch off the lights, fans computer and other electronic appliances when they are not is use.
- Energy consumption in the hostel staff.
- Fluorescent tube lights and neon bulbs are being replaced with CFL and LED lights. As alternative energy resources solar lamps have been installed.

Energy consumption during 2021-22

At K.R.G College (Auto) Gwalior the energy conservation measures taken up are

- Use of light LED
- Use of Compact Fluorescent lamp (CFL)
- Most of the air conditioners, refrigerators, and Projector other electrical appliances carry three to five stars rating.
- CRT monitors are replaced by flat-screen LCD monitor.
- The institute encourages paperless communication in the form e-mail instead of sending notices.
- Energy conservation awareness was carried out amongst students by means lectures during value education. The students are advised to switch off the electrical appliances when leaving the class rooms.

Water Resources- Harvesting and Management

At Govt. K.R.G. PG (Auto.) College, Gwalior water is required for drinking, laboratory works, lavatory, gardening, canteen, hostel etc. Total number students in the campus for a period of seven hours per day is given below

Water requirement per person is assumed to be 3 lit. To 4 lit. per person during their stay in the campus. Hence, water requirement for per day would be $1200 \times 4 \text{ liter} = 4800 \text{ liter}$, water requirement is met through the supply made by the bore well. The institute has 4 bore wells. Overhead storage tanks are fitted for storage.

Gwalior has almost 391mm average annual rainfall considering 20% as evaporation less. Actual water available for harvesting would be 780 mm. The campus has huge potential for rainwater harvesting. Institute has utilized this opportunity and has been constructed in such a way that the rain water collected used for recharging underground water. The lawn in the college campus is made at lower level for water conservation.

Department of Chemistry, Industrial chemistry has a rainwater harvesting system in the roof top. The water harvesting system was planned by the faculty of the department. The water thus being harvested is use for laboratory purpose. Water harvesting system is functioning college campus.

(A Photograph showing Water Harvesting System. Water conservation structures and bore well is enclosed as annexure)





S. No.	Particular of Building	Roof Area in Sq Mtr	Avg. Rainfall in Mtr	Volume of water in cubic meter	Volume of water in liters
1.	Dept. of Drawing & Painting Ist floor Main Building	1100	0.78	858	858000
2.	Social ScienceBloc	850	0.78	663	663000
3.	Music& PsychologyBloc	900	0.78	702	702000
4.	ScienceBloc	1140	0.78	889.2	889200
5.	Examcontrol room	190	0.78	148.2	148200
6.	Auditorium	350	0.78	273	273000
7.	Dept.ofHomeScience	700	0.78	546	546000
8.	Dept.of Microbiology	300	0.78	234	234000
9.	Dept. ofBiotechnology	280	0.78	218.4	218400
10.	Dept.ofComputer Science	235	0.78	183.3	183300
11.	GangaHostel	335	0.78	261.3	261300
12.	NarmadaHostel	792	0.78	617.76	617760
13.	KaveriHostel	634	0.78	494.52	494520
14.	Saraswati Hostel IInd Floor	347.5	0.78	271.05	271050
15.	Dept. of Commerce IInd Floor	370	0.78	288.6	288600
16.	Dept.ofB.B.A.	235	0.78	183.3	183300
Total					6831630

Rainfall Data of Gwalior RG Station

District	Station Name	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Missing Year
Gwalior	Gwalior	1970	25.2	28.4	8.4	0.0	6.4	142.5	112.0		81.8	0.0	0.0	0.0	404.7	
		1971	0.0	4.9	4.6	2.2	3.3	216.6	335.0	284.1	185.8	90.4	0.0	0.0	1126.9	
		1972	0.0	8.9	2.1	0.4	0.0	12.1		523.8	91.4	0.0	0.4	1.4	640.5	
		1973	0.5	8.4	0.0	0.0	4.8	29.8	181.4	508.5	88.6	35.8	0.0	14.5	872.3	
		1974	0.0	0.1	0.0	0.0	0.1	15.2	421.9	402.4	43.7	135.1	0.0	24.2	1042.7	
		1975	0.7	9.1	1.2	0.0	0.1	93.0	146.0	119.4	269.9	4.9	0.0	0.0	644.3	
		1976	0.0	11.0	2.0	12.9	15.7	88.1	225.7	389.2	107.1	0.1	6.4	7.2	865.4	
		1977	0.0	3.2	0.6	19.3	37.5	40.9	388.6	245.9	145.2	0.0	0.0	3.6	884.8	
		1978	0.2	1.4	8.3	9.1	0.0	72.1	126.6	222.5	119.1	0.0	0.0	0.0	559.3	
		1979	0.0	0.0	2.4	0.0	29.6	28.3	356.0		4.3	0.0	71.4	0.0	492.0	
		1981	0.0	0.0	13.0	0.0	13.1	43.5	291.1	99.8	57.6	11.5	61.1	9.7	600.4	1980
		1982	20.1	7.9	21.5	0.0	14.9	60.2	253.0	586.1	58.0	18.1	0.0	0.0	1039.8	
		1983	12.0	3.2	0.0	31.8	40.8	0.0	157.7	333.2	356.3	106.7	0.0	7.0	1048.7	
		1984	8.8	0.0	0.0	1.2	0.0	26.5	248.6	609.9	133.0	0.0	0.0	0.0	1028.0	
		1985	11.8	0.0	0.0	31.9	1.8	83.2	405.5	265.1	80.4	199.9	0.0	0.0	1079.6	
		1986	29.1	56.7	7.4	0.0	1.9	172.7	204.8	121.3	98.2	6.9	0.0	0.0	699.0	
		1987	24.2	24.8	7.0	0.0	48.3	2.4	181.5	117.6	61.4	55.0	0.0	11.2	533.4	
		1988	9.1	0.0	18.8	8.2	10.2	84.6	213.1	246.4	244.3	24.3	0.0	0.0	859.0	
		1989	16.0	0.0	3.2	0.0	0.0	93.1	49.0	289.8	121.0	0.0	0.0	1.3	573.4	
		1990	0.0	28.8	0.0	0.0	45.0	49.0	211.8	177.7	539.7	0.0	0.0	0.9	1052.9	
		1991	0.0	18.8	0.0	0.0	0.0	0.0	104.5	327.6	20.2	0.0	0.0	0.0	471.1	
		1992	0.0	0.0	0.0	0.0	0.0	42.8	172.4	250.7	181.9	104.8	12.0	0.0	764.6	
		1993	0.0	0.0	0.0	0.0	20.9	34.2	114.0	145.3	327.7	12.3	0.0	0.0	654.4	
		1994	0.0	0.0	0.0	0.0	3.0	131.4	233.0	360.1	29.0	0.0	0.0	0.0	756.5	
		1995	25.7	0.0	0.0	0.0	0.0	0.0	249.1	387.7	278.0	0.0	0.0	0.0	940.5	
		1996	34.0	61.2	0.0	0.0	0.0	91.9	446.8	239.3	214.6	62.1	0.0	0.0	1149.9	
		1997	0.0	0.0	0.0	0.0	0.0	43.4	262.0	358.0	148.8	29.0	29.3	137.6	1008.1	
		1998	0.0	0.0	27.3	0.0	0.0	71.1	289.2	257.8	242.1	127.5	0.0	0.0	1015.0	
		1999	8.1	0.0	0.0	0.0	0.0	38.2	0.0	197.2	208.8	56.6	0.0	0.0	508.9	
		2000	0.0	0.0	0.0	0.0	0.0	90.5	193.8	115.2	16.2	0.0	0.0	0.0	415.7	
		2001	0.0	0.0	0.0	0.0	32.1	187.0	331.8	247.6	7.7	20.0	0.0	0.0	826.2	
		2002	8.7	48.9	0.0	0.0	14.5	56.2	14.5	216.7	161.5	0.0	0.0	0.0	521.0	

1 of 2

Rainfall Data of Gwalior RG Station

District	Station Name	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Missing Year
		2003	0.0	41.2	0.0	0.0	9.0	19.5	167.6	184.2	217.6	0.0	0.0	17.4	656.5	
		2005	0.2	0.0	15.5	0.0	16.2	73.6	302.1	58.7	113.8	0.0	0.0	0.0	580.1	2004
		2006	0.0	0.0	21.4	0.6	9.2	217.7	123.5	81.8	58.1	20.7	0.0	0.0	533.0	
		2007	0.0	46.1	20.9	0.0	13.2	87.1	135.4	116.1			0.0	0.0	418.8	
		2008	0.0	0.0	0.0	11.7	19.7	254.2	297.0	282.3	162.6	5.6	0.4	0.0	1033.5	
		2009	0.0	1.2	8.3	2.2	5.4	7.1	90.2	91.3	196.5	180.6	21.6	15.8	620.2	
		2010	0.0	12.5	0.0	0.6	5.1	96.8	145.3	321.2	321.9	0.0	79.8	4.3	987.5	
		2011	0.0	7.4	0.0	8.8	20.9	195.8	353.1	210.7	179.4	0.0	0.0	0.0	976.1	
		2012	25.3	0.0	0.0	7.7	3.0	38.8	320.4	368.8	145.8	0.0	0.0	0.0	909.8	
		2013	1.3	61.4	0.0	0.0	0.0	165.4	168.5	372.1	41.2	108.9	1.2	34.9	954.9	
		2014	61.7	88.5	11.3	21.4	4.2	33.8	201.3	212.2	141.9	0.0	0.0	38.3	814.6	

780.6

Waste Water Management –

Water Generated from Drinking Water Point washbasins & Toilets is conveyed to Septic tanks near Individual buildings. Institution has number of septic tanks is to A Common tank.

There is one washroom on each floor of building and every department Attached washroom and in principal's office, Autonomy Building two washroom.

Sanitary waste water Generated from washroom is connected to sewerage system provided by College waste water Sewage Recycle in the College as Gray water and use of Garden.-

Paper waste Management -

Being an Educational institution paper waste is the main solid waste generated in the Premises.

To minimize Paper usage Following Practices have been adopted by the college.

- Photo Copies & Prints on both side of the paper.
- Digitalization Practices Adopted.
- Library has initiated E-Book system.
- Internal notices and communications are through E-mails/ SMS / Whatsapp /College Web-site.
- Staff Members use old Papers and Envelops for Internal Usages as rough work, Fill Marker's.
- Paper notices are displayed on Notice board.

E-waste Management –

Electronic waste is one of the main environmental Problems caused by concerning all the stakeholders, From Policy makers to the end users hence and Assessment of the overall sustainability of E-waste considering the three pillars. Environmental Economics and Social is an Important task higher Education Institutions are called to adopt Sustainable Development Strategies in order to give a Positive Impact on the Community in this work, the Assessment of the program of selective Collection of Electronic waste, Called Recyclatron Implemented at Universidad Autonomy de Nayarit in Mexico is presented The Objective of such Program is to Promote A Culture Towards Sustainability in E-waste Management at College Campus as Well as be a Reference for Social and environmental Responsibility from Community.

K.R.G is digitalized to large Extent. This includes Classroom, library etc. Unused Computers and their periphery all are the only source of electronic waste in the campus. There are Zoo Computer is laptops under use for teaching learning and office work and Air Conditioners in Working Condition. Every Effort is made to repair and use electronic and electrical devices piling up of E- waste is discouraged in the campus. College has sufficient amount of Computer, Printers in working condition. E-waste is collected & Stored in respective departments. College activity aware about electronic waste and motivate students for implementing innovative ideas use electronic and electrical devices. Piling up of E- waste is discouraged in the campus.

Solid Waste Management -

- It is proposed to have provision for segregation and collection of biodegradable & non-bio degradable waste within the premises.
- Wet and dry waste is segregated by use of separate buns.
- Sanitary pad vending machines with incinerators are installed.
- Scrapped benches are repaired from time to time and reused.
- Wet waste and dry waste segregation is not practices in the premises.
- Biodegradable waste is mainly generated in canteen and in food laboratory, How ever there is no signage for minimizing food wastage or for promotion segregation of wet and dry waste.
- Combined waste is directly handed over to the Nagar Nigam Garbage collection vehicle.



Hazardous waste management –

Hazardous waste cannot be disposed of in regular garbage. Any product which is labeled warning cautions poisonous toxic, flammable, corrosive Reactive or Explosive should be considered hazardous.

Biohazardous waste is any waste generated from working in biological laboratories that may contain infections or substances that are an environmental release risk. This includes materials that may present an actual or perceived biological risk to others on site. The college avoids the use of severe corrosive chemicals in the Practical teachers monitor that minimum quantity chemicals are purchased and used to save expiry and disposal. Solid waste in the chemistry lab

is collected separately and disposed of carefully without causing any harm to the inmates of the lab. And Proper system has been adopted to dispose of plastic waste. Plastic and polythene unbiodegradable materials are collected and disposed off separately.



Green Belt/ Land Scaping -

College has a vast campus with large number of tree planted around indoor Plants are kept along the corridors and entrance of the building. The college has a Campus of square meter. Large trees or plants in the premises. Potted plants are kept at the back sides which are brought indoors on certain occasions. Plantation also helps maintaining lower temperatures of the area.



Carbon Footprints:

Carbon footprint by measuring Carbon dioxide level in the Campus:

The level of Carbon dioxide is measured in different places across the Organization campus using a portable CO₂ Analyzer (Non dispersive infra-red meter). In addition, CO₂ meter is also displayed the readings of atmospheric temperature, relative humidity and dew point in the places, where the level CO₂ is measured. The meter started measurements of CO₂ level in the atmosphere after powered ON and updated the readings every second in the display screen. If the operating environment is changed (example from high to low temperature) which took 30 seconds for CO₂ sensor to respond and 30 minutes for flexibility in relative humidity. The meter features an audible alarm to give warnings when CO₂ concentration exceeds the set limit. It emits beeps (Abt.80Db) when CO₂ level goes over the set value and stops when any key (except SET) is pressed or the readings fall below the set values.

The Carbon footprint per year is calculated (www.carbonfootprint.com) based on electricity usage per year in which CO₂ emission from electricity and the sum of transportation per year in terms of number of the shuttle buses service operated by the Organization and number of cars, motorcycles and trucks entering in the Organization campus. These factors are multiplied with total number of trips in each day and approximate travel distance of vehicles covered in each day with a coefficient (0.01) to calculate the emission of CO₂ in metric tons per year.



Humans contribute an increase of carbon dioxide emissions by burning fossil fuels, deforestation, and cement production. Methane (CH₄) is largely released by coal, oil, and natural gas industries. Human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years. The largest source of greenhouse gas emissions from human activities is from burning fossil fuels for electricity, heat, and transportation.

Air Quality Data for Institution:

AQI Category, Pollutants and Health Breakpoints								
AQI Category (Range)	PM ₁₀ 24 - hr	PM _{2.5} 24 - hr	NO ₂ 24 - hr	O ₃ 8 - hr	CO 8 - hr (mg/m ³)	SO ₂ 24 - hr	NH ₃ 24 - hr	Pb 24 - hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5-1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1-10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-210	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very Poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430+	250+	400+	748+*	34+	1600+	1800=	3.5+
KRG Data	49.28 µg/m 3	27.43 µg/m 3	38.02 µg/m 3	48.40 µg/m 3	0.73 mg/m 3	17.24 µg/m 3	20.80 µg/m 3	0.6 µg/m 3

KRG NO_x Value : 5.59 µg/m³

Efforts for carbon neutrality –

Thinking about carbon footprints is a simple way of thinking about ways to reduce environmental pollution. Carbon footprint is the amount of Green house gases like carbon dioxide, methane, nitrous oxide emissions. It relates to the amount of greenhouse gases produced in our day to day lives through burning fossil fuels, for electricity heating, transportation etc.

- College maintains greenery by planting trees.
- LPG cylinders are being used in laboratories, hostels.
- Vehicles are not allowed in the campus.
- The leaf litter of the campus is not burnt Instead, it is used for vermin composting a long with other biodegradable wastes from hostel kitchen. The compost generated Is used as organic manure
- Energy consumption has been included as sustainability indicator in environmental Audit to asses and minimizes energy Consumption.

Carbon footprint for college building is considered the performance of the building can be increased by using LED lights and it will also reduce the Carbon foot print.

Green Initiatives

Awareness program on green campus initiatives need to be accounted in a sustainable manner. Its biro fits and self-sustainability can be projected for wider centric on earth and ecology conservation Innovative practices that add up credentials in implementing the green campus which needs to be promoted in the awareness program to the students and staff members including public domain details of extension activity such as cleanliness drive, Swacchata awareness and tree plantation by the strong NCC.

The organization leader being a major leading the NCC team has motivated and inculcated strong sense of commitment in protecting and nurturing the environmentthe student are involved in planting and cleanliness drive. Planting, vermin composting, Swachh Bharat Abhiyan, Clean campus- Green campus, Awareness programs, students gathering NSS/NCC activities and flagship programs.

You have probably heard that trees produce oxygen, but have you ever wondered just how much oxygen one tree makes. The amount of oxygen produced by a tree depends on several factors, including the species of tree its age factors, its health and trees surrounding. A tree produces a different amount of oxygen in summer compared to winters. So there is no definite value.

The institution has maintained the existing and added to the landscape environment of the campus. This has made the campus layout beautiful and has been appreciated by all dignitaries and a visitor visiting the campus is located in the vicinity of many trees to maintain the biodiversity. Various tree plantation programs are being organized at campus encouraging an Eco-friendly environment which provides pure oxygen within the institution. The plantation program includes various types of Indigenous species of ornamental, medicinal, multipurpose tree species (to promote environmental awareness through scientific lectures, conferences, seminars, and community service and create awareness of environmental sustainability and take actions to ensure environmental sustainability inside the campus).

1. College has an Eco-club which organizes different green programs throughout the year.
2. On the occasion of Van Mahotsav NSS unit organized a tree plantation on drive 09-July-2017.
3. 13 Students participated in the essay writing competition on clean environment at 09-June-2018.
4. In September 04-Aug-2018 NSS unit of college organized a campus cleaning drive in which about 10 students and six teachers participated in the event.
5. College is planning to install solar panels to promote use of renewable energy.
6. 10 July 2021 one day plantation work had been done in collaboration with Lions Gwalior "Astha". 25 different plants had been planted in the campus under Clean India, Green India program by SVCGC Cell (Career Guidance and Counseling Cell)

On 14.09.2021 Plantation Programme by International Association of Lions Club Aryan

- 1) On 22 Feb 2022 "Jal Jivan and Jalsanrakshan" Programme was organised under which staff and students take oath to conserve water. Other activities like poster making and slogan writing were also conducted.

- 2) On 29 August 2022 Green Ganesha Awareness campaign by EPCO Bhopal through online training and lecture was given on how to make Ganesha idol from clay was taught through this program student made clay idol of Ganesh and worshiped then the occasion of GaneshChaturthi.
- 3) 8 August 2021 under M.P Government Ankur program our college all staff including non-teaching staff and student plant saplings under plantation drive and register the values on Vayudoot App which was launched by state for managing activities and to provide certificate (Pranvayu Award).
- 4) Systematic survey of diversity of avifauna was done by Dr. Mohit Arya (Asstt. Prof. Department of Zoology Govt. K.R.G P.G College Gwalior) for a provided of one year from April 2015 to 2016 which shows there are 38 species of birds recorded belong to 24 families and 11 orders in our college campus Also feeding habits and IVCN'S Conservation status of the recorded birds species were also studied during the survey of our College.
- 5) On 2 February 22 world wet land day online webinar was organized Eco-club on theme wet lands action for people & Nature Guest lecture by Ram Kumar Lodhi (conservation Biology unit school of studies in Zoology Jiwaji University Gwalior) on sustainable use of wet lands and their conservation.
- 6) Botany Department and GESA, NASA Delhi jointly organizes international conference on environment and society ICEL 2020 socio-economic in curt Pandemic situation on 26-27-28 December 2020.
- 7) The Department of Botany organized online international multi-disciplinary conference on "Recent trends in global warming and biodiversity on 12-13 February 2021".
- 8) Department of biotechnology organized National seminar on environment (Epsd 2022) on 21 march 2022 speaker- Dr. R.R. Kanhere (V.C. Bhoj open university Bhopal) prof. And head punch karma Department Ayurvedik University Haridwar (U.K) and N.K Harit Prof. Zoology Govt. P.G. College Champai Mizoram.
- 9) Eco-Club organized a lecture by Dr. Santosh Yadav (Prof in Zoology Department) 10.12.2021. He gave his Presentation on single use plastic and bad Effects.
- 10) 06-08-2018 Students participated in tree plantation drive at college garden.

- 11) Student participated in rally to create awareness on ban on plastic organized by NSS and Eco-club.
- 12) NSS 30 students made 60 cloth bags and 100 paper bags which were distributed 40 vegetable and fruit sellers in the nearby market.
- 13) 29 March 22 Eco-club and zoology department organized bonsai making and tray plantation training by Rohit Upadhyay.

Professional implementation of all the Eco plans in the campus is done through the Eco-club and NSS (National Service Scheme). All the students, staff and employees are made to be members of the various club and should be tree planting and maintenance of greenery in the campus. Periodically conducting frequent Seminars, Conferences, Workshop, awareness rallies etc. On topics, relevant to the environment are conducted to educate and create awareness among the students and staff members.









Eco-Club

Eco-club activities are based on environmental awareness and improvement of environment. Environmental awareness action based activities like tree plantation cleanliness drives both within and outside the college campus are organized by are college .The main aim of establishing the Eco-club was to conserve the natural resources and the natural environment to create Eco-friendly environment and create awareness of biodiversity conservation and local environment issue among students and to create a clean and green consciousness among students through various innovative methods. Eco-club play am important role for future generation, the main motive of the Eco-club is to nature and teach the importance of environment to students.

The Eco-club along with NCC cadets and NSS volunteers of the college does its best efforts for a green campus organize seminars and special lecture on environment issues in the college Action based activities like tree plantation cleanliness drives both within and outside area public places like hospitals, etc with plantation and put campaign boards on general awareness.

Plantation programme are organised at regular intervals through Eco-club and NSS in the college premises. Removal of waste plants, thorn and bushes is done by Eco-club with the help of NSS volunteers and other students from time to time actively participated in the Swachh bharat programme.

Various activities and programs organised by Eco-club are as follows:

1. 2.10.2019- Swachta Shapath by the college student.
2. 6.9.2019- Plantation drive on campus on Hariyali Mahotsav.
3. 16.9.2019- Essay competition, slogan competition save water campaign and world ozone day celebration was done.
4. 5.6.2019-world environment day was celebrated.
5. 29.7.2021- on Hariyali Mahotasav occasion easy competition and plantation was done.
6. Eco-club organized Swachhta Pakwada on 1 Dec to 15 Dec 2021 under which various competitions like slogan Essay writing, poster, webinar, online Quiz were held .1.12.21 to 15.12.21- Swachhta Pakhwada under this week following activities are organized -

7. 6.12.2021- Eco-club volunteers started facebook page on environmental awareness among the student they also uploaded different activities performed by them on environment issues.
8. 7.12.21.- Green campus clean campus environment awareness rally was organized by K.R.G. students in college campus in which 200 student participated)
9. 8.12.21- Essay writing competition on Swachh Bharat and Swasth Bharat “(32 student)
10. 9.12.21.- poster making competition on green India and plastic free India “ (41 student)
11. 10.12.21.- online webinar under Swachhta Pakhwada organized by EpcO Bhopal “ role of eco-clubs in elimination of single use plastic “ speaker Dr. D.P Tiwari retd- forest officers Bhopal.
12. 14.12.21 online quiz on clean and plastic free India” (197 student)
13. 2.2.2022 – on world wetland day online webinar was organised on theme “ wet lands action for people & nature lecture by –Dr. Ram Kumar Lodhi (conservation biology unit school of studies in zoology Jiwaji University Gwalior) on sustainable use of wet lands and their conservation campaign program organised
14. 22 to 31.3.22- Swachhta under this week following activities were organised.
15. 25.3.2022 oath ceremony was organised in which student took oath against use of plastic & to minimize air and water pollution .(Swachhta Shapath) 26-3.2022
16. 27.3.22-online slogan competition (green campus and clean campus)
17. 28.3.22- poster competition 35 Swachh sarowar avam pradushan mukt sarowar.
18. 29.3.22 bonsai plants making and tray gardening Training programme was 45 organized
19. 30.3.22- Essay competition on ekalupyog plastic kedurupayog ki roktham 30 Students Participated.
20. 13.5.22-under pakshiyon ki swaraksha birds house and water pots were kept at different places in college by the volunteers of Eco-club and dana pani for birds group 37 birds species in college campus to save the birds.
21. 5.6.2022 world environment day was celebrated by college under which different awareness programs were performed like Nukkad Natak, poster competition motivational songs were says on environment by student.
22. 4.7.22- Hariyali Mahotsav was celebrated and Hariyali Sapath on forest conservation banned the use of plastic to maintain greenery was done

Health and Hygiene

Health and Hygiene is our prime concern. At the entrance of the college, Facilities are available for hand sanitization and washing. These practices are continued to minimize the chances of infection and to develop good habits. Clean toiletries and pure drinking water facilities are available at each wing of the college building functional toilets and hand wash facilities for students are important to minimize the incidence of infectious diseases, for this purpose there are safe and hygiene facilities of toiletries separately girls and staff in the college.

A validity of safe and pure drinking water is a big challenge for such a big institution. Accepting this challenge our college provided water coolers in each wing to provide the students and staff clean drinking water (using RO)

The college has very special concern for health and hygiene of the student and staffs our college conducts various healths related awareness and sanitation programme's are organized by the women cell, NSS with association with local hospital one part-time doctor has been appointed and facilities like first-aid kits, wheelchair, and vehicles are made available in case of emergency.

Various activities conducted by the college to spread the message of health and hygiene are as follows:-

1. On 6 September 2017 home science department organized nutrition week in the department in collaboration with I.C.D.S. by which students were given information about importance of nutritious food and healthy diet. This department also celebrate breast feeding week from 1 Aug 2017 to 7 Aug 2017. To make the girls aware about the importance of mother's milk for the new born.
2. On 1 December 2017 NSS students created public awareness about AIDS by staging a street play on world AIDS Day.
3. On 4th Jan 2018 in Collaboration with. Titan eye plus, an eye checkup camp was organized for students and staff members of the college.
4. On 7 September 2018 with the help of Indian Dental Associations a camp was organized in the campus. In this camp dental check-up was conducted by dentist Dr. Alok Purohit.
5. On 5 October 2018 NSS unit organized rally about Nasha mukti.

6. Health Awareness programme (General health Check-up) of student, teachers and non-teaching staffs.
7. Women development cell and Home science Department encouraged students to spend some time in cleaning college campus and surrounding by explain them the benefits of maintaining hygiene condition.
8. On 31 April 2019 world tobacco day is celebrated by students and staff by taking oath. To make India Drug free under “Nasha Mukta Bharat Abhiyaan”
9. On 6 August 2019 health checkup and counseling camp was organized in the campus in which senior gynecologist Dr. Veena Lohiya and Pradeep Saxena delivered lecture to the students about sexually transmitted diseases.
10. On 3 October 2019 again a health camp was organized in the campus in which hemoglobin of about 140 students of the college was tested. Red Ribbon club distributed sanitary pads to the needy girls of the college and described them the ill effects of using dirty clothes during those days.
11. On 2 December 2019 mental health awareness lecture was delivered by Dr. Abhijeet Shrivastava . He also guided girls students about stress management.
12. On 21 December 2019 a medical camp was organized on occasion of Zalima Divas by Department of women and child development of Gwalior MP and NSS, in which 3 medical representatives checked the hemoglobin of the staff and students and more than 400 students benefitted.
13. On 15 October 2020 global hand washing day. Was celebrated by NSS students during corona pandemic period.
14. On 1 Dec 2020 NSS organized AIDS awareness Rally on world AIDS days from college to Nehru Park. Students display slogans, play Nukkad Natak and by poster making to aware people.
15. On 2 October 2021 Gandhi Jayanti is celebrated and from 2 oct 2021 “Say No To Drugs” week was organized by easy writing, online Quiz, Nukkad Natak and by Swachhta poster making etc.
16. On the occasion of 152th Gandhi Jayanti from 2 Oct 2021 to 8 oct 2021 a health camp was organized in the campus in which specialist doctor (Dr. Renu Dubey eye specialist,

Dr. Sanyukta Shrivastav (dentist) , Dr. Anshu Bajpai (gynecologist) Dr. Namrata Tiwari (T.B and chest specialist) examined the girls and staff members of the college.

17. On 29 October 2021 in association with gynecologist association, students were given information about H.I.V virus. On the occasion of international aids day. On 1 Dec 2021 senior Doctor of Gajra Raja Medical College, Dr. Urmila Tripathi delivered lecture to girls of the college about A.I.D.S.
18. On 30 Jan 2022 Martyr's Day, Lecture is delivered on rural development and Gandhi Ji and pledge was to say no to Drugs.
19. On 7 April 2022 world health Day was celebrated by organizing health camps at village khureri by our college, under which checkup of 75 villagers are done and also, masks are distributed among them.
20. On 28 may 2022 Global menstrual hygiene Day was celebrated on this day K.R.G. student with Mahadev samarpan seva sansthan Gwalior made record of 100 feet sanitary pad (12000 pads used). These pads were distributed to the women of near rural areas, organized by IQAC KRGC and Eco-club KRGC.
21. From 26 July to 27 July 2021 students COVID-19 vaccination programme organized by MP Govt. In our College campus.
22. College organized vaccination camp on 26-07-2021. 40 Student and 360 outsider total 400 get vaccinated.
23. On 01-01-2020 "Shuddh ke liye Yuddh" program for stopping Adulteration in foodstuffs was organized by our college in which Gwalior collector also become part of students rally from college to Phoolbagh.

Recommendations/ Suggestions:-

1. In campus small, medium and large scale reuse and recycle of water system is necessary.
2. Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration process and ensure that the equipment's used for such usage are regulatory serviced.
3. Gardens should be watered by using drip, sprinkler irrigation system to minimize water use.
4. College follows energy conservation practices and installed LED lamps/tubes and need to replace the old tube lights with the new LED tubes.
5. Reduce the absolute amount of waste that is produced from college staff office.
6. Recycle or safely dispose of white goods, computers and electrical appliances or tie up with agency.
7. Installation of automatic lights with sensors can be installed to save electricity.
8. Raise Awareness:
 - Encourage students to help in monitoring energy consumption and implementation of corrective actions.
 - Integrate energy education should be promoted into classroom learning.
9. Grey water/ Sewage recycling system can be installed for flushing toilets, to reduce the fresh water foot point.
10. The list of trees planted in the garden, allot numbers to the trees and keep records and assign scientific names to the trees.
11. Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
12. The Eco-club committee shall be the source of advice and guidance to staff and students on how to implement this policy.
13. Celebrate every year 5th June as Environment Day and plant trees on this day to make the campus greener.

14. Indoor plantation to inculcate interest in students Bonsai can be planted in corridor to bond a relation with nature.
15. The electronic equipment which has maximum star ratings could be purchased which will consume less energy ensure environments sustainability and also operate at low cost.
16. Notices/ Signage can be put up/ displayed near switches and on notice boards, informing students and staff to switch off all electrical when not in use.
17. The college can introduce online app, which can be useful for conducting internal exams, assignments or reports submission. This system can also be used for displaying important notices and timetables to reduce paper usage.

Conclusion:

Govt. K.R.G. P.G. (Autonomous) College, Gwalior M.P. is committed for good environmental governance and accountability. Therefore, our college time-to-time organise different programs and initiatives by eco-club, NSS, NCC and other departments to develop awareness about protection and sustainability of green surroundings.

For maintaining green campus our college under Environment, systematically identify, quantity, report and analysis the environmental practices within and outside the college campus to make ecofriendly ambience.

The installation of solar panels on canteen rain water harvesting system, grey water management system and solid waste management system of our college are noteworthy.

The quality of air is very good in campus pollution free environment exist illumination and ventilation of the class room and the greenery in our college premises are environment friendly.

Also, to marinating such Eco-friendly premises our college conduct lectures, webinars, activities and competition in which our staff and students take part enthusiastically.

Green Audit Checklist:

College campus is audited with respect to Green Audit Checklist developed by STEP. College building is specifically designed with broad windows and wide passages to utilise sunlight and for ventilation. College has ample number of trees in the campus. Facilities such as rainwater harvesting system, rooftop solar PV systems are provided in the campus. STP is under construction.

Students and staff demonstrate consistent efforts in arranging environmental activities and actively participate in them.

Good Daylight Design

Sr. No.	Design Feature		Remarks (If any)
1.	Wide corridors open to daylight	✓	
2.	Broad doors and windows allowing daylight	✓	
3.	Building architecture which allows sunlight within buildings	✓	Specifically designed with broad windows and wide passages
4.	Presence of Skylight/ Rooflight	X	Large number of trees and herbal garden are present in the premises.
5.	Enough natural illumination in classrooms/ seminar halls/ laboratories	✓	Wide windows provided for natural sunlight.
6.	Ultraviolet (UV) filtering windows/ Use of exterior louvers or light coloured fabric or blinds for windows to control glare	✓	Light coloured curtains or blinds used for laboratory windows
7.	Operable/ openable windows	✓	
8.	Use of glass as facilitator of natural light	✓	
9.	Use of insulated and tinted glass to filter heat gain	✓	

Ventilation

Sr. No.	Design Feature		Remarks (If any)
1.	Good ceiling height which allows internal air circulation	✓	Height – about 4 m
2.	Self-movement ventilators in the roof	X	
3.	Wide windows and doors for classrooms, laboratories, seminar halls	✓	
4.	Wide corridors	✓	Width-2-2.5 m
5.	Operable louvers	X	
6.	Exhaust fans in kitchen/ toilets	✓	Exhaust fans laboratories, are provided in washrooms and kitchens.

Temperature and Acoustic Control

Sr. No.	Design Feature		Remarks (If any)
1.	Roof design & type (Double/ False ceiling with plaster of paris etc.)	✓	All roofs are false ceiling made from plaster of paris.
2.	Sand stone cladding/ tiling outside the walls.	–	
3.	Specially designed walls for temperature control, Sound noise barriers for windows/walls	✓	
4.	Building construction allows diffused sunlight but not the heat. Specially designed glass walls/ windows with better U value/ factor depending upon climate conditions	✓	

5.	Use of insulation material (e.g. autoclaved aerated blocks, hollow blocks, Thermocrete etc.)	X	
6.	Use of water bodies/fountain to maintain temperature within building	X	
7.	Climbing creepers on the walls	X	
8.	Retrofitting the existing roofs with cool roof technology	–	
9.	Use of landscaping as sound barrier	✓	Trees and shrubs are planted in the Campus. Indoor plants are also placed in the building.

Water Efficiency & Wastewater Management

Sr. No.	Measures		Remarks (If any)
1.	RO based water purifiers for drinking water	✓	
2.	Aerators to water taps	✓	Limited. Present only in some washrooms.
3.	Automatic toilet faucets	✓	
4.	Drip irrigation/ Sprinklers (for plant watering system)	✓	Sprinklers are provided in gardens.
5.	Dual flush toilet with cistern	✓	Dual flush is important for reducing water footprint.
6.	Dry mopping/ cleaning methods adopted	✓	
7.	Sewage treatment plant for sewage recycles.	P	STP of 130 KLD capacity is under construction.
8.	Rainwater harvesting	✓	RWH is provided in the campus.

9.	Regular maintenance for leakage free plumbing system	✓	Maintenance is done by maintenance department.
10.	Use of low flow/flow control water equipment or gadget.	✓	
11.	Water free urinals (No flush urinals/ Zero flush urinals/water less urinals/ air-based flushing system)	X	
12.	Water balance diagram and water consumption monitoring at each consumption level.	X	Water consumption monitoring at each level is essential to identify major water consumption areas.
13.	Routine monitoring of water quality.	✓	
14.	Awareness signs displayed for promoting water conservation.	✓	Water conservation signage to be displayed to create awareness among staff and students.

Energy Efficiency and On-site Energy Generation Mechanism

Sr. No.	Measures		Remarks (If any)
1.	Maintaining correct lux levels (70-300 lux) to avoid excessive light	✓	The illumination (Lux) levels were adequate in most areas (70-115 lux sunlight). Lights are kept switched off when not required.
2.	Computerized monitoring of electrical system	X	
3.	On-site energy generation (Diesel generators, LPG)	✓	Diesel generator of capacity 100 KVA is provided. LPG is used in kitchen and laboratories.
4.	Use of renewable energy (Solar, biogas).	✓	Rooftop solar PV system of 75 KWH capacity is installed

5.	Photocell Occupancy sensor for automatic light control.	✓	
6.	Regular maintenance of electrical system	✓	On-site maintenance department is present for regular maintenance.
7.	Use of energy efficient equipment like VFDs, maximum star rated equipment.	✓	All ACs are with star rating. 30% lights are LEDs.
8.	Use of energy saving bulbs (Compact florescent light/LED lights).	✓	30% lights are LEDs.
9.	Awareness signage on electricity Conservation.	✓	Electricity conservation signage is provided on laboratory notice boards. Signage should be provided near all switch boards.

Solid Waste Management

Sr. No.	Measures		Remarks (If any)
1.	Waste segregation practices and supporting hardware for waste segregation (Dry recyclable, organic, plastic, hazardous and E waste)	✓	Dry recyclable waste, e-waste and paper waste segregation is practised.
2.	Setting up recycling/composting/ biogas generation facility.	✓	Campus has vermicomposting facility and is planning to install composting unit.
3.	Minimise use of paper through digitalization.	✓	'Learning Management System' has helped in reducing paper use.
4.	Printing on both sides of paper/ Reuse of printed paper/ envelopes.	✓	
5.	Mechanism for collection & disposal of E- waste as applicable regulation.	✓	E-waste is stored and handed over to 'Nishta Innovative Solutions.

6.	Single use plastic free campus.	✓	College has prohibited the use of single use plastic.
7.	Inventories of waste generation and records of waste disposal.	X	
8.	Recycle/archiving of paper waste.	✓	Paper recycling unit is installed in the campus.
9.	Segregation of dry and wet waste.	✓	Blue and green coloured bins are installed for segregation
10.	Purchase of electronic products from companies which have service for disposal of product with buyback policy	✓	
11.	Recreating into new sustainable products	✓	Waste materials are being used by students for projects and during festivals.

Green/Environmental Audit

Sr. No.	Types of Audit		Remarks (If any)
1.	Energy audit (includes energy consumption, thermal comfort, and visual comfort).	✓	Energy Audit helps to assess existing energy balance, implement energy efficient operational strategies and adopt Energy Conservation Measures (ECM) effectively.
2.	Sound/ Noise and lux level monitoring (including indoor noise level, outdoor noise level)	✓	College has conducted environmental audit in June 2021
3.	Water and waste audit (including water consumption, quality, quality,	X	

	solid waste generation, solid waste disposal process)		
4.	Safety Audit	✓	It is recommended to conduct safety audit to identify the improvement opportunities and increase safety awareness

Universal Access and Efficient Operation and Maintenance of Building

Sr. No.	Design Feature		Remarks (If any)
1.	Easy access to the main entrance of the building and minimum two exists	✓	
2.	Energy efficient elevator	✓	
3.	Carpooling by staff and students/ use of Public transport/ Use of bicycles and battery-operated vehicles campus	✓	Most students use public transport. Carpooling is practiced by College staff.
4.	Preferred car park spaces for differently abled.	✓	
5.	Ramp/ stairs with handrails on at least one side	✓	Handrails are installed on all staircases. Ramp to be installed at crucial places such as the main entrance.
6.	Restrooms (toilets) in common areas/ Restroom for differently abled.	✓	
7.	Braille assistance for differently abled.	✓	Braille kits, audio books are present In the library.
8.	Availability of wheel chair		
9.	Emergency response plan for natural	✓	

	and manmade emergencies		
10.	Fire exits, assembly points, first aids, fire fighting systems	✓	First aid kits are provided in specific laboratories. Fire extinguishers and sand buckets are provided. Fire exit signage should be installed.
11.	Regular maintenance of building.	✓	In-house maintenance department is present.

Green Program

Sr. No.	Green Program		Remarks (If any)
1.	Up cycling of waste, Recycling beyond, books i.e. paper, aluminium, plastic, e-waste	✓	Dry waste is used by students for projects and during festivals for decoration purpose.
2.	Creation of "Green Team" in the institution/library.	✓	College has Eco Club and Garden Committee.
3.	Awareness programs on environment, energy management & safety (external sessions and academic courses)	✓	Each course has at least one environment related subject. Awareness sessions are arranged for student and also by faculty & students in nearby area.
4.	Outreach, activities, green programs (Tree plantation, waste segregation, plastic waste collection, cleaning etc.) records/ photos of programs.	✓	
5.	Presence of system/ methodology available for implementation of green initiatives and green projects (long term system-based continuity and not	✓	

	an isolated/ standalone activity)		
6.	Mindset for reduction, recycle of waste (Green mindsets)	✓	Students are motivated to recycle waste materials, Awareness programs are being conducted with the campus as well as in nearby area.
7.	Digitization	✓	
8.	E-archiving	✓	
9.	E-resources: E books, Online Journals, membership of consortium	✓	
10.	Maintaining green campus / Greening of campus.	✓	Campus has 1800+ large trees, shrubs and potted plants.

✓ : Provided P: Planned/Under Construction - : Not Applicable X: Not Provided