



Karnatak University's,
KARNATAK SCIENCE COLLEGE, DHARWAD
NAAC Accredited



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7.2.1 - Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Best Practices:I

- Encouraging Students to focus on Research & Development and create scientific temper

Objectives of the practice are:

- i) Create scientific curiosity which makes students to think about developing new techniques, which is very much required for the current situation also. This takes student to dedicate or commit to working in the direction of ATHMANIRBHAR BHARAT
- ii) Expose B.Sc and M.Sc students to the new knowledge and latest developments in varied fields through arranging seminars and lectures by the emirates Professor from IIT's and Premier Institutes.
- iii) Arranging platform for the students to interact with the scientists who are working in the cutting edge research.

Context:

It is noticed that, with updated academic syllabus and practical experience alone, it is difficult to get students' attention to R & D. Most of the time students may not be aware of the advanced technologies adopted in the large scale industry and cutting edge research happening around the globe. Hence, it is one of the institute's responsibilities to create platform in such a way that students should get opportunity to interact with scientists. In this context, the institute constituted the working space called "Study Circle" in major department's viz., Chemistry, Physics, Botany, Zoology, Geology, Geography and Forensic Science and Criminology and Computer Science.

From the department of Chemistry under *Madam Curie Study Circle*, lecture was arranged on Processing Technology. Dr. Shivakumar Angadi, Principal Scientist and Associate Professor, Academy of Scientific and Innovative Research (ACSIR), Mineral Processing Department, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, Orissa delivered a lecture on Mineral Processing-A rare and Unique Profession. The B.Sc VI semester students were taken to PEPSI Co-limited. The students were able to see how a small piece of plastic/fibre takes a shape of different sizes of bottles. The students interacted with

the head of R and D centre to know the steps, processes and the quality assessment test involved before releasing the product into the market .

From the Department of Forensic Science and Criminology, students of B.Sc. III semester were taken to the Sub-Urban Police Station, Dharwad, to practically experience the structure, organization and working of the of system at the Police Station, administration of Police Station and function of police station. The students were interacted with police sub-inspector Mr. Patil, PSI and Mrs. Laxmi, PSI. The students were inspired and excited to witness the real time existing investigation process. The students were exposed to the practical and on field aspects of the Criminology and Forensic Science.

To encourage the students to get into recent development in the field of Physics, the Department of Physics in association with the Indian association of Physics, encouraged the students to appear for National Graduate Physics Examination. The students who qualified in this examination were sent for workshop/ training programme in premier research institute.

In the department of Zoology, under the guidance of Mr. Ambarish Sindagi, selected students were encouraged to take up research on bio-re-medication, of Cadmium and Chromium from Industrial effluents by indigenous bacteria. The students were encouraged to participate in Indian Young Innovators and Inventors Challenge (IYIIC) Regional IYIIC-2021 held on 16th and 17th April, 2022 at Gulbarga,India, organized jointly by National Council for Science and Technology Communication (Department of Science and Technology), Government of India, New Delhi, NOSTC (Network of Organization for Science, Technology and Communication), New Delhi and Karnataka Rajya Vijnayana Parishat (KRVP) at Gulbarga Universtiy, Kalaburgi. In this regional IYIIC, the students presented Poster Presentation and were awarded the “Best Juvenile Innovator/Inventor” and got selected for the National Event of IYIIC held on 27th and 28th May 2022 at Sigma University, Vododara, Gujarat.



Dr. Shivakumar Angadi, Principal Scientist and Associate Professor, Academy of Scientific and Innovative Research (ACSIR), Mineral processing department, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar given lecture on importance of mineral processing.



Mr. Patil, PSI giving inspirational speech on real time investigation to the Criminology and Forensic students. .

**Microbiology Students Achievements at INDIAN YOUNG INNOVATORS AND INVENTORS CHALLENGE (IYIIC)
Regional IYIIC – 2021 held 16th and 17th April 2022 at Gulbarga University, Kalburgi, Karnataka.**



Best Practice II

Title of the Practice: Solid waste management and eco friendly campus

Objectives: Karnatak Science College has a wide **spread** green campus, with fifty four acres, having good green cover. To maintain cleanliness in the campus, it has adopted a best practice called "Solid waste management and creating eco-friendly campus"

- To meet out the requirements of green and clean campus, waste generating places have been identified; in fact, some measures have been designed and implemented in order to maintain cleanliness in the college campus.
- Dustbins have been provided to segregate wet and dry solid waste at the identified locations in the campus.
- Dry waste is emptied in collaboration with the city municipal corporation, and the wet waste is used for composting.
- The compost generated is used in the botanical garden of the college.
- Awareness has been created among the students about the impact of cleanliness on health and well-being of individuals present in the campus.
- Waste management is achieved in a non-polluting and responsible manner.
- All the departments in the campus are responsible to maintain greenery, by way of plantation drives and also by nurturing the existing plants in the campus.
- viii Establishment of renewable energy sources like roof-top solar power plants in the campus is being attempted.
- Campus green auditing and carbon-sequestration as been taken up.
- Collection and proper maintenance of e-waste are done.

Context:

- Since our college campus is very large with around one thousand five hundred students studying in various departments, the generation of solid waste is natural. Hence, it is essential to develop protocols and healthy practices to ensure a pollution free campus.
- In fact, light weight dry waste is subjected to disperse in the campus due to strong winds, thereby creating an unhealthy environment. Therefore, the light weight dry waste needs to be collected, before its proper disposal by scientific segregation and disposal methodologies.
- To reduce energy dependency by using renewable resources.
- To conserve and enrich the ground water by adopting rain water harvesting strategies.
- To recycle wet waste, by converting it into a compost, and later using it as manure in the garden present within the campus.

The Practices: Solid waste management and creating a eco-friendly campus is a healthy practice in our college campus. Hence, the campus is green and clean, thereby attracting a large number of members of the public, who enjoy exercising in the campus, breathing the fresh air.

- Waste generating locations like cafeteria, students home, laboratories, vehicle parking slots, hostels, bank, health centre, among many other locations have been identified and dustbins are installed for the collection of waste. In fact, the collected waste is segregated at the place of collection itself. Dry solid waste is emptied by the municipal corporation, whereas the wet waste is dumped in pits for composting, and compost is used for the garden. The e-waste is emptied by the personnel identified by Karnatak University, Dharwad.
- Harnessing Solar Energy:

- Installed capacity in hosetls: 6 units of 500 litre each capacity (equivalent to 120 electric geysers of 25 litre capacity each)
- One Solar panel to recharge UPS system of 2kVA capacity.
- Eleven Solar street lights are provided in the campus.
- Rain water harvesting: Each departments harvesting rain water to reduce the water requirement and use it for various purposes, particularly in the laboratories and for gardens. There are four rainwater harvesting pits with the standard plot area 200 Sqmt, required volume of 4.0 Cumt rain water harvesting pit with the dimension of 2.0 mts are provided in the campus.

Evidences of Success: The practice of solid waste management and creating eco-friendly Green campus has made a significant impact, by creating a pollution free campus. Some of the evidences are listed as follows.

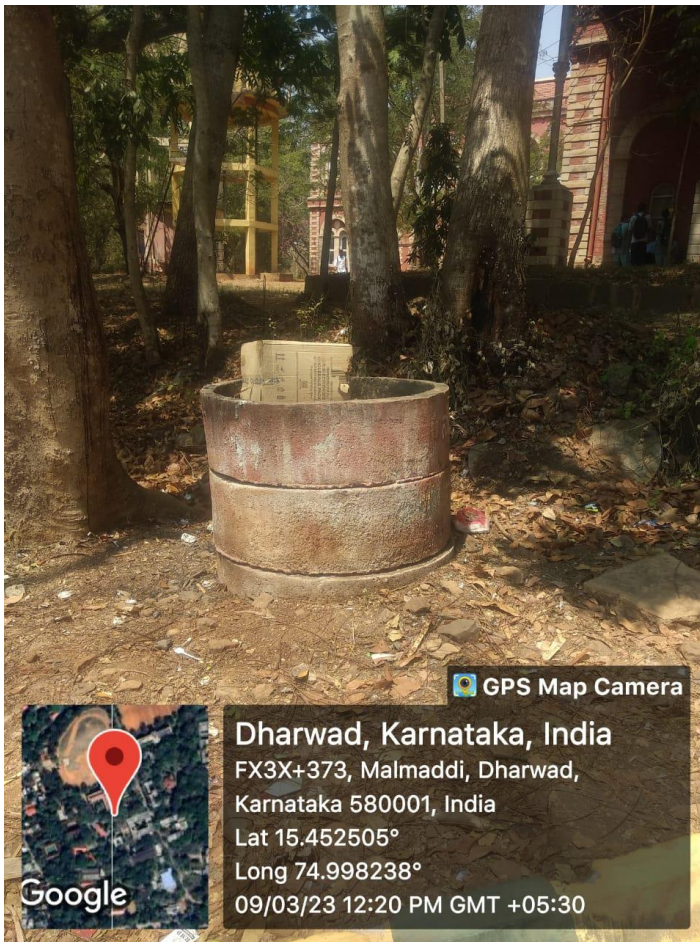
- This process has created a plastic free and green campus which has supported the teaching and learning process by creating a suitable environment.
- The process of carbon sequestration reveals the reduction of carbon dioxide concentration in the atmosphere of the campus.
- Harnessed solar energy has reduced our dependency of non-renewable energy sources like electricity. This facility has benefited nearly 700 girl students in the hostel.
- 2kVA Solar energy recharging UPS has been installed, and it can be used for four hours, uninterruptedly.
- Harvested rain water has enriched the ground water situation and the excess amount of water is used for gardening.

Problems Encountered and Resources Required:

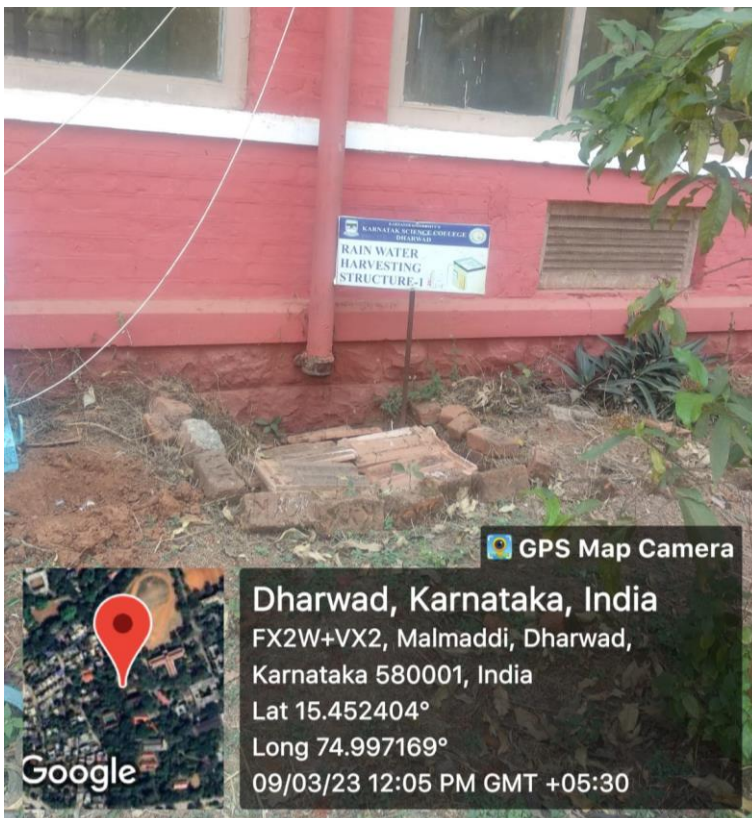
i. Resources Required: The College meets out the expenses incurred for this activity from its internal resources.



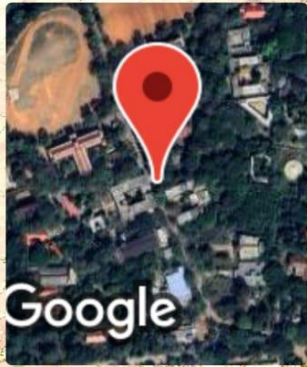
Plantation in Karnatak Science College, by then Principal Dr. Bellad.



Dustbin for collecting solid waste materials in the college campus.



Rain water harvest in the departement of Zoology.



Dharwad, Karnataka, India

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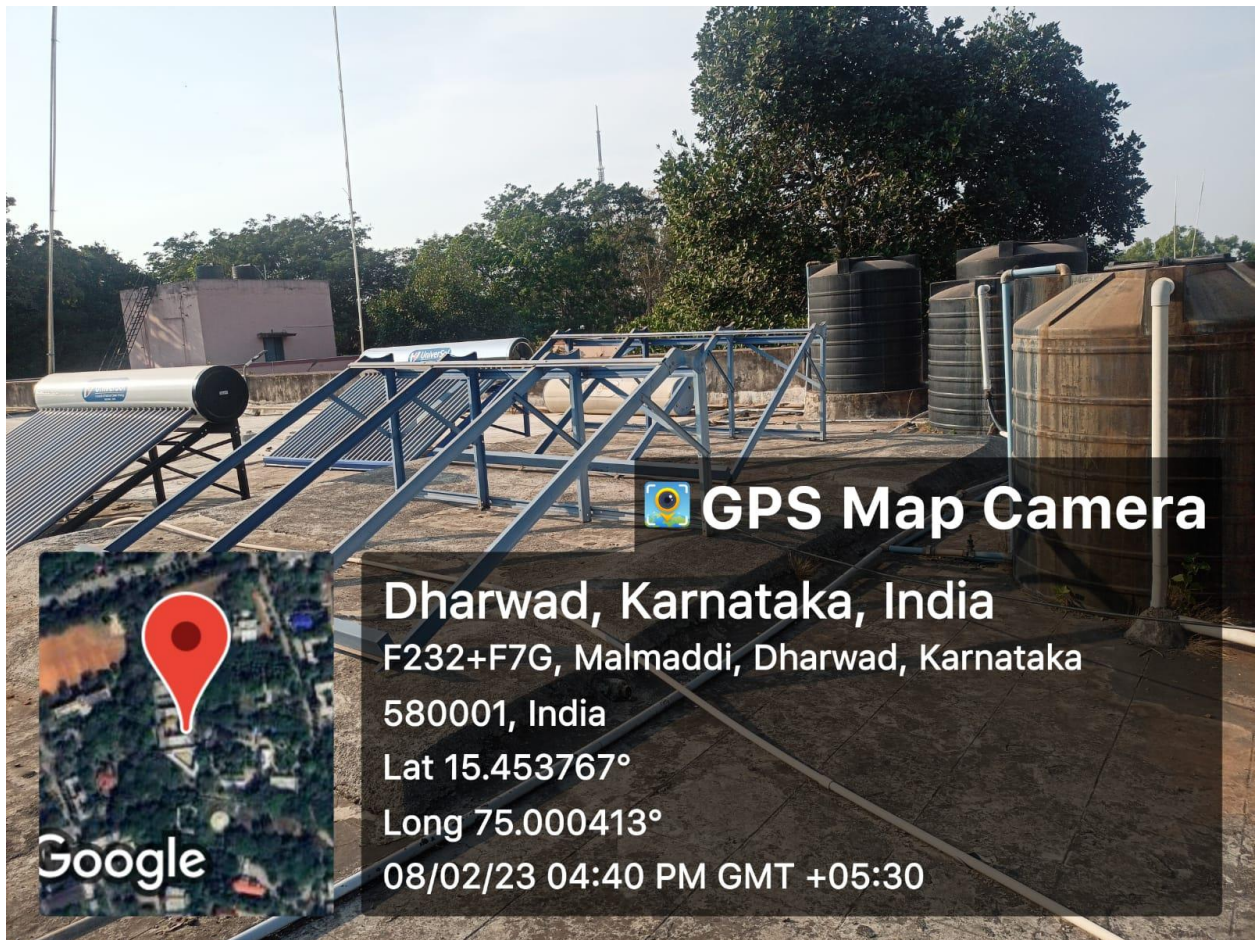
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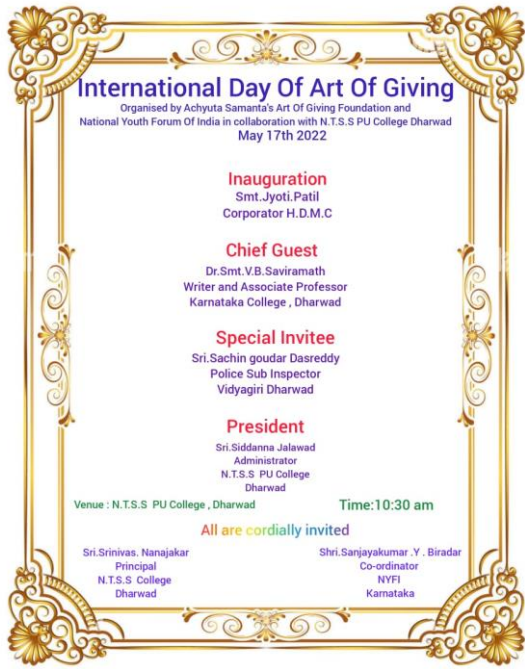
Lat 15.452501°

Long 74.999062°

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Solar heater installed in the Kaveri ladies hostel





The NSS students have participated in Campus Cleaning Programme on 04-07-2021.






-Principal,
Karnatak Science College
Dharwad.