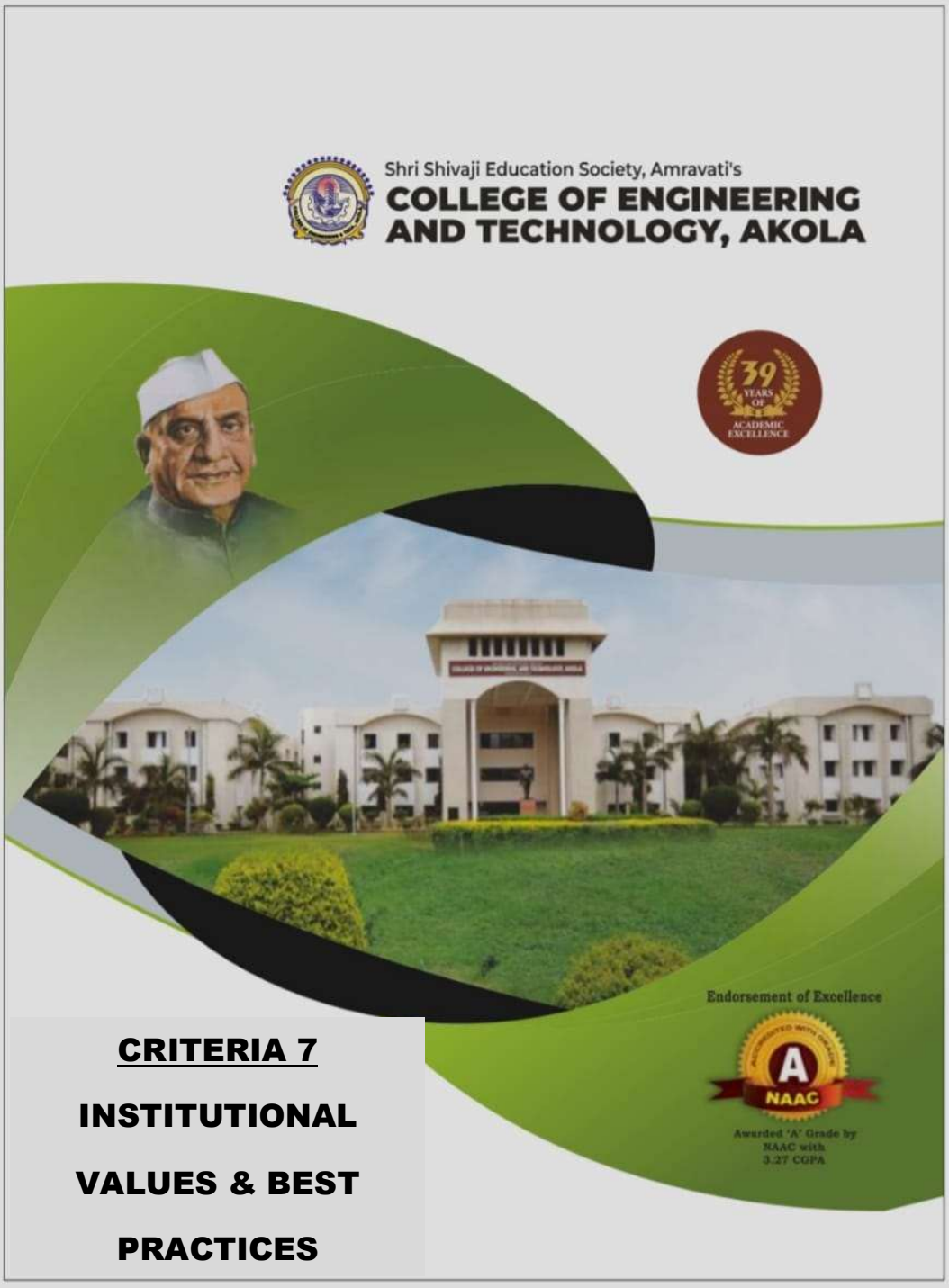

CRITERIA 7

INSTITUTIONAL VALUES & BEST PRACTICES

Policy On Green Campus & Environmental & Energy Usage

Shri Shivaji Education Society, Amravati's
COLLEGE OF ENGINEERING AND TECHNOLOGY, AKOLA
Founder President : Late Dr. Panjabrao alias Bhausaheb Deshmukh
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President : Shri. Harshvardhan P. Deshmukh
Principal : Dr. S. K. Deshmukh

Date: 04/05/2023

Declaration

This is to declare that the information, reports, true copies and numerical data etc

Furnished in this file as supporting documents is verified by IQAC and found correct.

Dr. S. K. Patil
IQAC Coordinator

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COLLEGE OF ENGINEERING & TECH. AKOLA

INTRODUCTION :

The term “Green” means eco-friendly or not damaging the environment. This can acronymic ally is called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN). Green Accounting can be defined as systematic identification quantification, recording, reporting & analysis of components of ecological diversity & Expressing the same in financial or social terms. “Green Auditing”, an umbrella term, is known by another name “Environmental Auditing”. In auditing literature both the terms are being used interchangeably. To implement the green audit other important aspects such as objective of green audit. Drivers of green audit, future scope, benefits, and advantages are necessary to understand. The green audit practically involves energy conservation, use of renewable sources, rain water harvesting, and efforts of carbon neutrality, plantation, hazardous waste management & E-waste management finally. The experiments on the nature by avoiding natural rules, this can be a one major reason behind that is green Audit. In scenario people are not caring of nature, they are directly or indirectly damaging the environment and it causes problems like; global warming, difficulties in maintaining ozone layers, air pollution, water pollution etc. Green Audit is the most efficient & ecological way to solve such a environmental problem. For protecting the nature as a human being we have to show our sense of humour towards the mother earth. It is necessary to conduct a green audit in college campus because student aware of the green audit, its advantages to save the planet & they become good citizen of our country. Green audit and sustainable development process help to reduce the wastage and associated cost as well as increases the product quality. Obviously, there is relationship between Green Audit and Sustainable Development of the any business organization. Green audit and sustainable development process help to reduce the wastage and associated cost as well as increases the product quality.

GREEN ENVIRONMENTAL POLICY OF THE COLLEGE OUR ACTION PLAN

I.OUR SOCIETY

Ours is the second Largest Education Society established by Dr. Panjabrao alias Bhausaheb Deshmukh Bhausaheb's mission –education to the downtrodden Our Shri Shivaji Education Society, Amravati is a premier educational institution of Central India with branches in all the districts of Vidarbha in Maharastra. It is registered as a Public Charitable Trust (R.N. F/89)(founded in 1931-32) . Its founder President was the late Dr. Panjabrao alias Bhausaheb Deshmukh who established various schools, colleges, hostels and other teaching and technical institutions and devoted all his energy for strengthening and enlarging the activities of the Shri Shivaji Education Society, Amravati. The Society was registered in December 1932. In 1958, it had one primary school, seven middle schools and eight colleges. Today it runs 24 senior colleges 54 Jr. colleges, 75 middle schools, 35 hostels mainly in the region of Vidarbha but also in other parts of the state. The educational institutions cover areas like agriculture, arts, bio-technology, computers, education, physical education, engineering, 5 horticulture, information technology, law, medicine, micro-biology and the pure sciences. It also runs a Polytechnic for boys and girls at Amravati Along with other members, Bhausaheb devoted himself to educate the people by establishing school and colleges far and wide in the Vidarbha. The Society was awarded the Dr. Babasaheb Ambedkar 'Dalit Mitra' Award in 1993-94 by the Govt. of Maharashtra. In the year 1999-2000 the Society was awared the 'Gadge Maharaj Memorial Award, on 5th September, 2000 the Govt. of Maharashtra declared the Society as the "Best Administered Society" in the state and bestowed upon it a cash award of Rs. 1 lakh. In its citation, the State Government formally recognized the seminal contribution made by the Society in the field of education and cultural advancement.

II.OUR INSTITUTE :

Ours is the pioneer Institute imparting Technical Education in our region since its inception 1983. Our College of Engineering & Technology, Akola is central India's premier multi disciplinary Engineering institute engaged in education, applied research, training and consultancy services which focuses clearly on Engineering

III. MISSION:

Technical education for the individual, social and national development with global acceptance, by providing the relevant infrastructure with due consideration for our culture and the environment.

IV. VISION:

In full obeisance to the vision and foresight of Dr. Panjabrao alias Bhausaheb Deshmukh, this institute will strive tirelessly to educate and qualify the students from all the strata of the society, who are future engineers and technocrats, to take up challenges of modern era so that they are nationally and globally accepted in the application of their skills and knowledge to the benefit and development of the society.

V. OUR CAMPUS

Campus Population – Area – 9.6 Acres Regional setting and connectivity College Campus is situated on National Highway No.6, at about 13 km from Bus Stand,15 km from Railway station and 6 km From Shivani Aero drum. Easily accessible by Private Vehicles. It is surrounded by farms on East and west sides, on north National Highway No. 6

VI. TOPOGTAPHY:

Our college campus is surrounded by agricultural land on east, west and south side. Nala is flowing on south side which is full of water 3 months of year i.e. in Monsoon. It is having pollution free atmosphere different types of flora and fauna. Economic Base of Campus – It is Educational Institute. Campus Design We ourselves as an initiative have developed our premises under Dr. Bhausaheb Deshmukh Research Cell .

CONSTITUTION FOR GREEN AUDIT

The Green Audit is carried out as per the environmental policy of the College of Engineering and Technology, Akola, and Green audit checklist. The aim of the audit is to check the existing practices and provide advice for the development of environmental policy and practice in the areas of:

- Tree plantations
- preservations Energy use and conservations
- Eco-friendly campus
- Green environment and clean campus
- Waste Management I Solid waste management II E-waste
- management Water conservation and management
- Bio-diversity and threatened/ endangered species

4) COMMITTEE MEMBERS FROM INSTITUTE FOR GREEN AUDIT MEMBERS OF GREEN AUDIT TEAMS:

Sr. No	Name of the Member	Designation
1	Dr. S. K. Deshmukh	Principal / Chairman
2	Dr. S. K. Patil	Dept of Mechanical Engg.
3	Prof. Malini Nathe	Green Campus Coordinator
4	Dr. S. V. Dhomane	H.O.D. Architecture Dept.
5	Dr. D. V. Wele	Member, IGEAC
6	Dr. S. N. Naikwad	Dept of Electrical Engg.
7	Dr. D. C. Kothari	Dept of Chemical Engg.
8	Dr. Jyoti Shegokar	Dept of First Year Engg.
9	Prof. Ananad Tathod	Dept of Civil Engg.
10	Prof. K. S. Gilda	Dept of Computer Engg.
11	Prof. Gulfam Shaikh	Dept of Architecture

DETAILS OF INITIATIVES ALREADY TAKEN BY ADMINISTRATION FOR PROMOTING GREEN CAMPUS

I. PLANNING AND DESIGNING OF CAMPUS OPTIMUM LAND USE-

planning of campus is compact planning with multiplexing of spaces e.g. Barrier free studios that can be used as exhibition spaces. Studios are equipped with furniture that is space efficient. We have provided built in cupboards in studios in Architecture dept. Building, for students equipments. Walls of Studios are constructed with rat trap bond so as to protect from harsh sun rays in summer. In computer Department courses are carried out in two shifts hence optimum use of functional spaces is carried out. We have provided ramps and toilets for physically handicapped persons. In order to admit more light and ventilation a fully glazed steel casement windows are provided which admit 100% natural light and comfortable air circulation. The workplaces are arranged to take advantage of natural light and ventilation from windows.

II. LANDSCAPING -Taking in to consideration the hot and dry climate of Akola we have provided ground covers in the form of lawns in overall campus to reduce heat gain and to create a microclimate. On the periphery of entire campus the existing trees are preserved and in addition to that number of trees has been planted in entire campus forming the green belt, which acts as a buffer zone for sound and heat. Such kind of tree plantation will reduce carbon percentage and increase oxygen level. This creates a healthy and pollution free environment. Court yard in Architecture department is provided with sitting tiers with reused flooring material in combination with lawns and beautiful flowerbeds. Every year the staff and students are involved in tree plantation. Up till now numbers of trees has been planted in College as well as Akola city. The campus is having 5,000 numbers of trees including small plants, medium, big trees, belt of bamboo tree and two gardens which have made the campus environment fresh and eco-friendly. NSS unit is also carrying out tree plantation as regular activity in campus and nearby villages during NSS winter camps. Faculty Staff and students are encouraged to plant trees inside and outside the campus on special occasions.

III. FENESTRATION AND SHADING:

In entire campus all the building blocks with sunken windows are provided which prevent harsh sunrays and rain. Maximum use of north light is used. Sufficient numbers of doors and windows are provided. Deciduous trees are planted near building blocks which gives protection from harsh sun rays.

IV. BUILDING MATERIAL AND CONSTRUCTION TECHNIQUES.

Locally available materials are used. Walls of Studios are constructed with rat trap bond so as to protect from harsh sun rays in summer. Verandahs are provided so as to protect from sun. Collage building is painted in light colour so as to radiate maximum heat.

V. INITIATIVES BY USING OF ENERGY EFFICIENT APPLIENCES:

Energy audit is conducted for saving of electrical power. Resistive based fan regulators are replaced by solid state devices based regulators which reduce losses in the electrical power also electronic ballasts are used to control power. Replacing old light systems by energy efficient Compact Fluorescent Lamps (CFL) tubes and bulbs. The faculty, staff and students takes care of switching off lights, fans and other electrical devices to avoid wastage of energy when they are not in use. Single switch is used to switch off classroom, laboratory power supply for fans and light points. The workplaces are arranged to take advantage of natural light and ventilation from windows. Energy awareness campaigns have been carried out for the student, faculty and staff members. Placards, notice boards have been used for creating awareness about power saving and safety.

VI. WASTE MANAGEMENT:

Everyday all the academic buildings and other surrounding area in the campus are cleaned by sweepers and they separate out waste and dispose accordingly. Classrooms and studios are provided with dustbins which are prepared by students by reusing other materials. i).COMPOSTINGWith the vision to produce fertilizer with the campus using the waste generated in the campus, the waste compost plant is installed and operated by department of civil

engineering in college campus; Waste excluding polythene generated in the campus is converted in to compost by using PDKV culture. The waste mainly generated being a teaching institute is used papers along with other organic waste like leaves and garden residues. Initially all the organic and inorganic waste is separated so that organic waste can be put for composting. After 4 to 6 turnings in the period of four month, the fertilizer is obtained (approximately quantity of 20 sags of 50 kg). The efficiency obtained on volumetric basis is 111kg / cu-m / four months. Similarly another lot is obtained in the interval of four months. Other waste materials are also used in construction i.e. Recycling is done. ii).E-waste management Out-dated and low-end e-components are being used for demonstration. E.g. CRO, Function Generator like these electronics equipments have been used as demonstration models in respective laboratories. The major e-waste such as out of use instruments / equipment, CRTs, Printers, Computers, Electronics gadgets, circuits, kits have been written off and then it is sold out to buyers by auctioning. All the miscellaneous e-waste such as CDs, batteries, fluorescent bulbs, PCBs and electronic items are collected from every department and office, and delivered for safe disposal. 9 Useful parts of electronic gadgets like resistors, capacitors, inductors, diodes, transistors, thrusters etc have been removed from the gadgets for reuse purpose in practical /projects. VII. WATER HARVESTING Rainwater / roof water harvesting has been done in entire campus to increase underground water table. Surface run of & roof top water is collected and used for garden irrigation. Rainwater is collected from each shade and corner campus and drop into into the wells For water harvesting survey has been carried out and underground storage tanks are constructed in campus. The tress and lawns are maintained with water drips and sprinklers respectively. Reuse of waste water for gardening. Every year NSS volunteers are involved in Special Camp where they construct CCTs (Contour Crafting Traversing) and coffer dams.

VII. ENVIRONMENT CONSCIOUSNESS:

Thus the institute is very much conscious about environmental issues. Regular practices and activities have been adopted to create environmental awareness. The institute is very keen for making the campus eco-friendly by adopting certain measures and policies. All the academic buildings and other surrounding area in the campus are cleaned regularly by sweepers. The Institute has adopted energy conservation practices, tree plantation and water harvesting for making the campus clean, green and healthy. The institute has adopted following strategies for environmental consciousness: Regular Campus Cleanliness, Polythene free and smoking free zone helps to make campus eco -friendly. Green belt evergreen trees and plants. Tree Plantation on the occasion of Independence Day & "Tree plantation Day". Reduction in usage of papers by digitizing most of the records. Effective utilization of rough papers (one side printed) for printing. Students are motivated for eco- friendly practices. Maximum use of Public transport by students and staff. Sharing of cars and two wheelers by staff and students. Announcing 'NO VEHICLE DAY '. This year 24 December was announced as no vehicle day in our Campus. Providing enough singes in entire campus for proper circulation of vehicles to minimize fuel consumption, reducing noise level, indication of parking spaces. Entire college map is located at the main entry so as to avoid inconvenience for circulation in entire campus. Minimizing the paved area and maximizing permeable area so as to percolate more water in to ground and minimize heat gain. Beautiful landscape is provided in entire campus to create cheerful and healthy atmosphere. Various types of flora and faunas exists in our beautiful n cheerful campus. Co-existence of various species occurs in our campus. Site inventory –on periphery of entire campus data regarding trees, shrubs, plants, climbers has been studied and experts opinion has been taken for their usefulness and conservation. Topography of entire campus has been studied and remedial measures are taken for disposal of storm water/ rain water. Measures regarding channelization, pitching, turfing of existing Nalla has been taken under consideration as a proposal to increase water level, to avoid soil erosion and to beautify campus. Proper drainage systems have been provided to collect and dispose off sewage water in entire campus. In existing COETA

Campus problem areas are identified such as dark corridors, insufficient ventilated areas, and remedial measures are suggested. Use of solar energy is under consideration. LED lights are suggested to minimize electrical energy consumption Awareness/training workshops are organized in the campus regarding Cost Effective Technology, Energy Efficiency, renewable energy applications, and taking suitable measures for energy conservation. Suitable architectural retrofit options for building envelop (floor, roof, walls etc.) and energy efficient glasses for windows are under consideration. The redesigning of exterior surfaces of the buildings with energy efficient material is under consideration. Any other innovative actions/ points to be taken for making existing campus green.

Dr. S K . Deshmukh
Principal
C.O.E & T Akola

Principal
College of Engg.
& Tech., Akola