BEST PRACTICES

PRACTICE 1: ECO-SENSITIVE ENVIRONMENT

Objectives of the Practice:

SVCE believes in Sustainable living. The College has implemented and is practicing many measures to enable the same.

The Context:

In view of the climate changes across the world and diminishing green cover all over, it's imperative that the world strives to improve the eco-system within itself and to this end every community starting from individuals and institutions must contribute their mite for conservation of environment.

The Practice:

- Energy conservation measures like switching off the lights/fans in the classrooms/passageway/toilets when not in use.
- Recycling of biodegradable waste where-in leaf litter, grass clippings are collected and deposited in Compost pits situated on the campus to decompose wastes into organic manure.
- Sewage Treatment Plant: The College has a STP with a capacity of 250KLD which includes 200 KLD of Ultra-filtration facility.2 lakh litre of water is recycled every day and the resulting 1.3 lakh litre of water is utilized for the maintenance of the Campus gardens.
- Food waste Management: Food waste is collected and deposited in bio-compost pits to convert them into manure using Effective Microbes (EM) solution.
- Waste Paper Management: Paper waste are periodically collected and given to ITC's Creating Well Being Out of Waste (WOW).
- Rain Water Collection Pond: A 75,00,000 litre rain water collection pond helps in collecting and saving rain water for use in the campus.
- RO Plant is functional.
- Using solar water heaters in the hostels.
- A Solar Power Plant of 35 KW is functioning in the college.
- LED bulbs are used in many of the buildings.
- The College is a Plastic Free and No-Horn Zone.

Creation of Micro-Habitats in the Campus:

Habitat destruction and fragmentation are considered to be important reasons for species reduction and extinction. As a measure towards overcoming this potential threat, several micro-habitats are created in the Campus such as Butterfly Garden, small water tanks in the Campus to ensure habitats for a variety of flora and fauna. Further, a Herbal Garden housing 40 different species of herbal plants has been established in the Campus.

Disposal of Non-biodegradable Waste:

E-waste:

E-waste generated in the laboratories are collected and stored in a place ear-marked for this purpose. Those items that may be recycled and reused are done so. The rest are disposed to authorized agents.

Chemical and Biological Waste:

Hazardous chemicals are not used in the chemical engineering labs while the non-hazardous chemicals used are disposed through laboratory sinks (after diluting them with water) connected to sewage treatment line for further treatment. The bacterial cultures which are propagated in the laboratories for experimental purpose are discarded after following suitable decontamination method.

Evidence of Success:

The campus has a green cover of about 60% and is host to a variety of birds during the migratory season**.** The College has a huge nursery where plants and tree saplings are grown and distributed to the government schools around here.

Problems Encountered and Resources Required:

Since the soil is not very conducive for green cover, it takes a lot of effort to grow trees and plants in the institute and maintain a good environment; however, it is being done.

PRACTICE 2: PROMOTION OF A CONDUCIVE RESEARCH ATMOSPHERE

Objectives of the Practice:

The aim of this practice is to provide necessary infrastructure to nurture a research-oriented mind among both the faculty members and students of the College.

The Context:

To keep pace with the advances of technology, there is an urgent need to promote research and innovation amongst both the faculty members and student community.

The Practice:

The College has 11 UG and 8 PG programmes and 10 research centres pertaining to various disciplines. In an effort to popularize research and innovation among faculty, the College actively sponsors faculty members for pursuing research programmes. 108 out of 251 faculty members and 4 supporting staff are Ph. D holders. 59 of them are recognized Ph. D supervisors and are guiding 196 research scholars in our centres of research. 81 candidates have completed their Ph.D programme in our centres of research. Faculty and students are encouraged to file patents. Faculty Research Day is conducted every year to facilitate easy exchange of information across various disciplines. Further, faculty members are encouraged to apply for projects from various funding agencies.

In addition, faculty members are encouraged through incentives to publish their research findings in international/national journals. They are sponsored to present papers in national/international conferences. They are encouraged to patent their innovative ideas. The Ph. D holders are provided additional incentives based on their performance judged on several criteria that nurture research in the institution. Faculty also undertakes consultancy work for various organizations.

Students are encouraged to pursue research, collaborate with mentors within and outside the institution and sponsored to present their findings in international/national conferences in India and abroad. They are also encouraged to convert their research work and file for patents. Student Research Day is conducted in the month of March every year to enable the students to exhibit their research ideas and innovations.

Intra-mural funding is provided for both the UG and PG students to support their project work. It is proposed to provide stipend for full-time research scholars who join the research centres in the College for pursuit of Ph. D programme.

Interdisciplinary Nano Research Centre:

To establish a centre of excellence in Nanotechnology, the College initially invested in

infrastructure worth Rs.20 lakhs. Upon receiving the approval for establishment of the centre, a grant of Rs. 80 lakhs was sanctioned, of which the College provided Rs. 40 lakhs as seed money; Rs.40 lakhs was provided by the government and additionally, an amount of Rs. 11 lakhs was generated by the College from AICTE. Presently the centre is fully functional.

Entrepreneurship Promotion & Incubation Center (EPIC):

EPIC was established in the College in the year 2016 and funded by the College and MSME, Government of India. EPIC actively encourages students and faculty to come up with innovative ideas.

Evidence of Success:

The number of research publications has increased considerably over the last few years and number of consultancy projects undertaken has also increased. Also, the number of patents submitted and project proposals submitted are exhibiting an increasing trend. So far 48 patents have been filed of which 28 have been published and 3 have been granted. Many students join prestigious universities in India and abroad to pursue higher studies and research. Financial assistance is provided to the Ph.D. candidates in the form of Junior Research Fellowship (JRF) through the major projects awarded to the faculty member. 10 ideas for innovation by our students (and faculty) have been approved by EDII, Government of Tamil Nadu, Ministry of MSME, Government of India and DST, Government of India and funding has been provided through EPIC. 3 Ph.D. scholars received fellowship through the Indian Nanoelectronics Users Program (INUP), Indian Institute of Science, Bangalore, to execute their Ph.D. project. The centre for Nanotechnology has trained 100 UG students, 10 PG students and 10 Ph.D. Scholars in the field of Nano Engineering and Nano Science.

Problems Encountered and Resources Required:

The faculty members are not able to devote all their time to research on account of their academic commitments and administrative responsibilities.