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Criterion VII – Institutional Value and Best Practices

7.2 – Best Practices

AY: 2018-19

5.1 **Best Practice-I**

1. **Title of Practice:** Curriculum Enrichment Measures

2. **Objective:** This practice was implemented in order to enrich the existing curriculum and give hands on experience to our students as per industry expectations.

3. **The Context:** Curriculum revision takes place every four to five years by affiliating university. However, in order to keep the students in pace with the current and latest developments in the industry, additional curriculum enrichment measures have been introduced in the college.

4. **The Practice:**

Curriculum enrichment is done by following measures:

1. Value added evening courses – From the first year onwards Computer programming and Soft Skills classes are conducted for students identified to be weak in these skills. In the second and third year Core JAVA, python, machine learning, programming in C, CATIA, CAE(hyperworks), IOT, Raspbery pi for Beginers are some of the value added courses conducted by the institute. Besides this workshop are conducted on python, PCB design etc.
2. Mock Group Discussion/Personal interview (GD/PI) sessions with professional expert for the third year students.
3. Organization of large number expert lectures on latest developments in the respective branch by every department.
4. Student internships – A large number of students do internships in third year. College helps in procuring internships offers from Army, DRDO and other government organizations for our students.
5. Project based learning-For better learning experience, along with traditional classroom teaching and laboratory work based learning, project based learning has been introduced with an objective to motivate students to learn by working in group .
6. Sponsored projects – Around 60 - 70% of final year projects are sponsored
7. Technical club activities – Students get a handson experience through various club activities like Supra-Baja, Robotics, Open Source software, Innovation and Incubation cell etc.
8. Project Competitions – AMALGAM-Final year project competition with cash prizes is held every year.
9. Startups- All projects are rigorously monitored by faculty and higher authority of college and full technical and financial support is provided to some projects based on their evaluation report by which they are converted into startups. Few students of BE launched their startups with the help of college.
10. Co-curricular based credit system (CCCBAS) - This has been introduced to motivate student participation in technical activities, value added certification courses, internships, MOOCs like COURSERA and UDACITY.

5. **Evidence of Success**

Excellent results of our students in the examinations, student achievements in co-curricular activities and consistent placement percentages 92% are proof of the success of this practice.

6. Problems Encountered and Resources Required:

Some of the students are reluctant to pay additional fees for the value added courses hence, Institute provides part subsidy for the value added courses to ensure full participation. Identifying suitable resource persons for conduct of the various training activities and their monitoring requires continuous perseverance by the management and heads of departments.

5.2 **Best Practice-II**

1. **Title of Practice:** Green Environment Initiatives

2. **Objective:**

This practice was implemented to reduce the institute's carbon footprint make the campus green. Also, student participation in these initiatives makes them responsible citizens.

3. **The Context:**

The growing concern for environmental protection and conservation led the institute to implement a large number of green environment initiatives.

4. **The Practice:**

The main initiatives are as follows:

a) Energy conservation

- Automatic power factor controller (APFC) is installed in the power house which gives power factor of unity.
- Almost all street lights, toilets and corridors are provided with the LED fittings.
- Auto flush and auto cut off system is installed in the hostel toilets to save electricity and water.

b) Use of renewable energy

- Interactive solar power generating system of 325 KW is provided on the roof top of the academic building. With the installation of this system 50 to 60 % of the total electricity requirement is met. It also has additional advantages like: no escalation in power cost for 25 years, up to 20% rebate in property tax under Green Building Norms, uninterrupted energy use during day time round the year.
- Apart from this solar water heating system is provided in all boys and girls hostels for hot water requirement.

c) Water harvesting

- Water recycling or waste water treatment plant of 200 m³ or 2,00,000 liters capacity has been constructed. The principle of the treatment is based on Phytoid technology. The Phytoid Technology treatment is a subsurface flow type in which wastewater is applied to cell/system filled with porous media such as crushed bricks, gravel and stones. It consists of three zones (i) Inlet zone composed of crushed bricks and different sizes of stones (ii) Treatment zone consist of same media as in inlet zone with plant species and (iii) Outlet zone. Daily 150 m³ or 1,50,000 liters recycled water is available. This is being used for landscaping of the institute. Institute also proposes to further use this recycled water for flush systems. This would save 30% of fresh water.
- Rainwater harvesting is being done near Hostel Flank "H". This is being further developed.

d) Tree Plantation

- Every year students along with the garden staff plant trees. Due to this program over the years the campus has become lush and green. Last year 2500 saplings were planted by students. Also, a herbal garden consisting of plants with medicinal values is cultivated in the college campus.

e) E-waste management

- E waste generated is first reused in the campus itself. Then discarded waste is disposed off by board of officers to authorized vendors.

5. Evidence of Success

- Monthly electricity bill for institute has reduced due to rooftop solar power generating system as well as extensive use of LED lights in the institute.
- Due to use of the recycled water from the waste water treatment plant for gardening purposes the daily water requirement from outside agency has reduced.
- The green cover of institute has increased considerably in last 5 years.

6. Problems Encountered and Resources Required

Regular maintenance of the solar rooftop power generating system and the waste water treatment plant is required.