Best Practices I (2020-21)

Title: Virtual Lab

Objectives:

- To provide remote-access to Labs in various disciplines of Engineering.
- To enthuse students to perform experiments by arousing their curiosity.
- To make available a complete Learning Management System around the Virtual Labs.
- To share state of the art equipment and resources.

The context:

Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge. With the present day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible. Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced concepts through remote experimentation. Today most equipment has a computer interface for control and data storage. It is possible to design good experiments around some of this equipment which would enhance the learning of a student. Internet-based experimentation further permits use of resources, knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).

This helps to

- practice more experiments for slow learners
- perform experiments beyond syllabus for advanced learners
- self-learning

The practice:

- Teacher uploads the semester planner at the beginning of the semester.
- Teacher informs students about the date and time as per schedule in the planner.
- Teacher explains the procedure of using Vlab. for his/her subject.
- Students perform experiment and fills the in-house feedback.

Problem encountered and resource required:

- Students sometimes do not have enough IT resources at hand.
- High bandwidth internet connection is required.

Evidences of Success:

- Improvement in students' understanding of experiments.
- Improvement in practical and oral examination performance.
- This has helped students in learning basic and advanced concepts through remote experimentation.
- Joyful learning.

Title: Multidimensional personality development Program

Objectives:

- To enhance the technical and verbal communication skills
- To make the students function effectively as an individual and as a member of team
- To make the students comprehend and demonstrate knowledge and understanding of engineering principles
- To appreciate and reward the participation of students
- To instill life long learning skills and realize the responsibility towards society.

The context

Along with academics, it required to groom the overall personality of the students .Taking this into consideration, the department has the Multidimensional Personality development program for the all round development of students. The program aims to enhance the different skills of the student such as communication skills, presentation skills, life long learning skills etc .The students are given exposure to various activities wherein they can participate and improve their skills .

The Practice:

- **50:10 Module**: During a 60 minute lecture , 50 minutes are for teaching by the faculty member and 10 minutes are given to students to summarize the contents . This helps to improve the communication skills and confidence of the students
- **ELECTROFUNDA**: Every year the contest named ELECTOFUNDA is organized wherein the students are asked to working team and demonstrate nay one principle of Electrical engineering. This improves the ability of student to work as group member. It also improves their presentation and communication skills.
- **Energy Conservation Drive**: The renewable energy club of the department organizes the Energy Conservation Drive ever year. The students visit the residential premises. Schools, Ganpati pandals etc give information about the importance of energy conservation and use of renewable sources . By doing this drive they understand their responsibility as an engineer towards the society.

- **Reward System**: Anything Done good needs appreciation. The students are rewarded not only for their academic performance but for participation in various activities too. This boosts the overall moral of the students and they look forward for various activities
- **Year Book Publication**: Every year the department publishes the Year Book which has the records of all the activities of the organized by the department in the academic year. It also has all the details of the achievements of the faculty members as well the students

Problems Encountered

- A lot of motivation is required to be given to the students to participate in the activities.

Evidence of Success

- Significant improvement in the placement.
- Students are able to communicate effectively during seminar, project oral and practical examinations