Best Practices

- **Practice 1: Emphasis on Design based problem solving.**

Objectives of the Practice:

1. To inculcate innovative thinking and problem solving ability
2. To undertake challenges of providing solution to real-life problems

The Context:

1. Professional core courses are considered for implementation
2. Design based problem solving and use of modern tools

The Practice

In congruence with the present industry requirements of highly efficient and productive man power, it is the need of the hour that the fresh graduates would be able to contribute significantly in solutions to the ever increasing industrial problems. Problem-based learning is becoming increasingly popular in educational institutions as an approach to mitigate the gaps of traditional teaching. In comparison to the traditional approaches, the students participate actively to respond to a real-life problem. This is why problem-based learning is envisaged as an innovative measure to encourage students to learn how to self-educate via real-life problems. In this direction, the institute emphasis on problem-based learning as a solution to produce graduates who are creative and can think critically, analytically, and solve problems. This process is introduced gradually and it is expected to grow to cover every area of engineering disciplines. Complex engineering problems solving, mini projects, data analysis etc. are undertaken to hone this ability. Small groups are formed combining bright and weak students. The faculty members act as the facilitator. Open source resources are consulted to aid the problem solving. Collaborative and Cooperative teaching learning is adopted for this purpose. A particular problem is dealt with due considerations to the system components, constraints, operating environments, solutions required, and multiple approaches in the solution and their relative merit and demerits. The result analysis is also an important component of such problem solving. Possibility or suggestions, if any, for the improvement of the process performance or the system performance or the product are also investigated and discussed as a part of the proposed problem solving approach.

Evidence of Success

1. Improved grade points in End semester examination
2. Higher placement

Problems encountered, if any:
Access to of real-life industrial data for analysis

Practice -2

Coverage beyond syllabus

Objectives of the Practice:

1. To educate the students with sound knowledge base fortified with advanced and emerging topics

The Context:

Coverage of extra topics which are not covered in the syllabus

The Practice

To educate the students following a stipulated curricula and syllabus is not adequate for comprehensive knowledge base. Frequent modification and rationalization of syllabus is also not a feasible solution considering different constraints. However, this problem can be appropriately addressed by the course teachers. It is the flexibility of the course teacher to formulate a detailed lecture plan meticulously so that advanced and emerging topics are also taught in synchronization with the fundamental topics so as to enrich the course to the maximum possible extent. Faculty members continuously update their lecture plan and implement the same for mutual benefits.

Evidence:

Higher placement records

Progression to higher studies

Problems encountered, if any:
It is difficult to access industry people and experts from other institution regularly.