

## **INSTITUTIONAL BEST PRACTICES**

### **1. TITLE OF THE PRACTICE**

#### **STRENGTHENING PEDAGOGY TO STRENGTHEN THE ACADEMIC PROGRAMME**

**(ACADEMIC REFORMS VIA INSTRUCTIONAL DELIVERY)**

### **2. OBJECTIVES OF THE PRACTICE**

The major components of our Graduate Programmes are curricula and syllabi which may not be adequate to prepare our graduates technically and professionally proficient as per requirements of the Programme Outcomes. The objective of this practice is to adopt various means to supplement the deficiencies existing in our academic programmes keeping in mind achievement of the Course Outcomes (COs) vis-a-vis Programme Outcomes (POs). The practice addresses those lacunae which can be mended through instructive means resulting in a strong pedagogy – the art, science and practice of teaching.

### **3. THE CONTEXT**

The main challenge in this issue originates from the lack of flexibility in the curriculum and syllabus. Non autonomous status of this institute of higher learning makes us follow a rigidly prescribed programme drafted by the affiliating University which had to consider the needs of a large number of affiliated colleges. In the process of preparing the graduates it is often observed by us that the syllabus or curriculum misses certain topics or fails to impart technical or professional knowledge to the desired level. For example, the drafted curriculum does not give the learners opportunity to know the real life power apparatus and components in Electrical Engineering, or almost all the graduates are inadequately exposed to environmental science and technology through the University prescribed syllabus. These challenging issues are addressed in design and implementation of this practice through instructional delivery.

### **4. THE PRACTICE**

The practice consists of a bunch of sub practices all related to the same issue i.e. strengthening pedagogy to strengthen the academic programme. It has three stages.

Stage I: Identification and classification of gaps (or lacunae) w.r.t COs / POs

Sources: Feedbacks from Students/Faculty/Industry/Alumni/Others (Advisors/Peer Groups)

Each of the identified gaps and its mitigation constitutes a sub practice under this best practice.

Stage II: Determine the scopes of the gaps and design them in the appropriate pedagogic forms

Stage III: Implement using appropriate platforms

Sl No	Nature of gaps (identification and classification)	Scopes (design)	Platforms (implementation)	Examples from different programmes
1	Technical / professional topics (theoretical)	Extramural topics in the syllabus	Inclusion in the regular syllabus as a part of class room teaching	ECE / CSE / BME
2	Technical practice (laboratory)	Extramural laboratory experiments	Added to regular laboratory experiments	ECE / CSE / BME/ME, etc.
3	Professional exposure (practice)	Extramural laboratory with hardware and / or software of industrial relevance. Industrial visits.	Added to regular laboratory experiments. Industrial visits referred to class room teaching.	“COMPONENT LABORATORY” under different departments, such as, under Electrical Engineering Department houses all real life power apparatus and components like circuit breakers, insulators, motors, etc. for professional familiarization of graduates.
4	Linking academics and industry (growth of professional awareness)	To explain how experiments designed for a specific laboratory have industrial relevance	Poster display in all laboratories to be used by the laboratory instructor on the first day	“KNOW YOUR LABORATORY” programme in all laboratories is a poster display that narrates professional applications of the laboratory experiments prescribed for that laboratory.
5	Gaps in POs e.g. Inadequacy in aspects of (a)Environmental and (b) Societal issues	Extramural programmes (laboratory, hand on practice and training)	(a) Laboratory activities (b)Exposure to practical and training programmes related to social services	(a)“ENVIRONMENTAL LABORATORY” is used to allow hand on practices and explain the scope of work (b)“SOCIAL ENTREPRENEURSHIP” programme under Entrepreneurship Cell along with various local social service programmes are encouraged for students

### **Constraints / limitations**

Setting up Component laboratories under different departments, Environmental laboratory (mostly for student extramural training) and Incubation Centre for carrying out exposure programmes related to Societal issues, required funds, space and dedicated faculty competent to plan and execute it. Industrial response was not encouraging.

Successful implementation of the practice is limited by our competence in visualisation of the approach to the problem and innovative thinking.

## **5. EVIDENCE OF SUCCESS**

Direct or Quantitative measurement of evidence of success in the matters under discussion may not be possible. Hence indirect methods are adopted and cited below.

- ✓ Appreciation by NBA for Component Laboratories
- ✓ Appreciation from Employers of our graduates.
- ✓ Better performance by our graduates during professional interviews
- ✓ Growth of interest in Environmental and Societal issues

## **6. PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED**

Problems encountered.

- ✓ Experience in planning and competence in execution
- ✓ Dedicated and cooperation from all corners.
- ✓ Resources like space, funds and dedicated faculty

## **7. NOTES (OPTIONAL)**

The practice can be considered as an effort for internal academic reform realized through instructional delivery. Similar practices have been designed involving other aspects of pedagogy e.g. Improvement of Evaluation techniques, Methods of improving the learning capacity of the students, etc. Evidently it is a unique practice that will help other affiliated Higher Educational Institutes (HEI) to adopt so as to circumvent the problem and move towards introduction of academic reforms in their own way.