



Best Practice-1

Improving Employability Through Skill

Development Goal:

In an attempt to bridge the above gaps as well as enhance the employability of its graduates, Vaagdevi College of Engineering has actively been involved in the design and implementation of add-on programs across different engineering streams. The following are the educational objectives and expected outcomes of such add-on programs:

1. To expose students to industry culture and practices
2. To inculcate in students a flair for problem definition and build problem-solving capability
3. To provide hands-on training to students in contemporary industry tools and techniques.

The Context:

Despite best efforts at developing a curriculum for industry ready engineering graduates, a targeted and well-established approach towards bridging the gap between the talent pool and the demands of core engineering sectors still needs to be clearly defined. Attempts are being made in pockets to understand the industry need and address the same through add-on programs at the undergraduate level. However, the effectiveness of such programs critically depends upon thorough understanding of industry needs and skill requirements and developing programs, in collaboration with the concerned industry sectors, in order to fill the gap. Educational institutions typically tend to work in isolation with the demands of the industry leading to engineering content delivery being mostly textbook oriented and traditional. Students hardly ever get to understand or be exposed to state-of-the-art developments in their respective fields.

The Practice:

Administering an add-on program requires careful consideration of the engineering curriculum already being delivered, the gaps in the curriculum that need to be plugged to make the student industry-ready and the ability of the administering department to effectively bridge this gap. The following is the procedure adopted by departments in introducing an add-on program to bridge curricular gaps:



- I. Review the academic curriculum and identify gaps in the content
- II. Define industry sector requirements and identify potential skill development/training programs to augment student capability
- III. Prepare a clear mapping of the curricular gaps with the proposed skill development program
- IV. Identify available infrastructure with the department and propose additional facilities (if any) required (with budgetary requirements)
- V. Identify faculty competency available in the department (if any) in the proposed area and/or propose faculty skill enhancement plan (with budgetary requirements)
- VI. Anticipated intake, proposed course fee and viability of the program.

A Detailed Project Report covering the above activities along with the estimated budget, possible demand, proposed course fee and viability for break-even within 5 years is prepared by the department proposing to introduce an add-on program. The report of the department is reviewed by the central administrative team of the college chaired by the principal. Upon approval of the proposed program, the department proceeds with implementation of the add-on program. The central administrative team is responsible for monitoring the effectiveness of delivery of the add on program and in ensuring that the stated objectives and outcomes are met while the departmental program committee, consisting of a team of faculty with relevant training, bears the responsibility for implementation and successful delivery of the program.

The college has put in place suitable add-on programs in collaboration with industry to bridge skill gaps. The course content for these programs are detailed based on discussions with the concerned industry and the individual delivery modules and their contents are finalized. The programs are delivered to the students during their course of study at the undergraduate level typically beginning from the later half of their II year and ending in the first half of their final year of study. By the time they complete their B. Tech program, they also receive certification of completion of these industry-oriented training modules.



Evidence of Success:

- I. Increased student employability as reflected in improved placements
- II. Increased competency and resulting enhanced delivery from faculty in their teaching learning
- III. Increased R&D capacity resulting in significant improvement in research proposals
- IV. Substantial growth in Industry- Institution collaboration.

Problems Encountered and Resources Required:

When applied practically, a few gaps exist between the proposed methodology and practical implementation. This is mainly because of the financial constraints as each department is given budgetary allocations exclusively to meet costs of academic services which are curricular in nature. Hence the need for procurement of auxiliary infrastructure to meet the industrial skill needs to be carefully planned and administered properly. To avoid this, measures are taken to anticipate the requirements so that resources can be not only well maintained but also managed to enhance the purpose of skill development.

Apart from this, faculty have to be properly trained to justify the objective of the value added program by being flexible to the changes in the current trend. Should there be lack of pace with the contemporary versions of the technology, an aggregate overview of the package is lost. Faculty with aptitude in the program are therefore sent for training at the respective organizations in advance to be able to handle the training programs.



Best Practice - 2

Title of the Practice: MENTORING SYSTEM FOR STUDENTS

Objectives of the Practice:

To minimize dropouts, improve performance and reduce stress of the students through personal counseling.

The Context

Students face various forms of stress - personal, academic, physical, mental etc., Considering that students are new to professional college life, it creates a lot of stress, especially to hostel students who are away from their family for the first time. Students from educationally weak background feel inferior, hesitate in class and are unable to perform well due to inhibitions. Statistics reveal increase in number of suicides and dropouts. Considering the student-teacher ratio in classrooms, at times it is difficult to give individual attention to students in the class. One solution therefore is a 'Mentor' who can develop a bond with students in true sense. Mentoring is required for students to achieve emotional stability and to promote clarity in thinking and decision making for overall progress.

The Practice:

- Each teacher is assigned up to 20 students during the course of their 4 years.
- Each mentor is provided with a file comprising of students' academic profile, career aspirations, hobbies, subject information, term-wise record of mentorship plans, report of parent-teacher meetings, record of participation of the students in co-curricular and extra-curricular activities and achievements.
- They meet at least once a month to discuss, clarify and share various problems which may be personal or academic.
- The mentors encourage the students to participate in co-curricular and extracurricular activities and sports.
- Their academic performance and other activities are monitored and recorded
- The mentors also keep in touch with the parents regarding the student's attendance, test



performance, fee payment, examinations etc., on weekly basis.

- The mentors also counsel the students who might be in need of emotional support.
- When students face any problem in any department, either with the staff or work completion, the mentors take necessary corrective measures to sort the problem.
- Mentors take special care of weak students, who are given advice on how to study, prepare a time table, clarify the doubts and also give notes to study.
- Chief Mentor of the department monitors the progress of counselling of students by their respective mentors.
- Students' problems are discussed with the parents, department heads, other faculties and necessary actions are taken to resolve them.

Evidence of Success:

This practice has shown improved results in the examinations, attendance, dropouts, participation in co-curricular and extra-curricular activities, better discipline on campus. The students are more relaxed and have a healthy relationship with the faculties.

Problems Encountered and Resources Required:

The college understands and acknowledges the need for effective mentoring for better outcome for its students. Though there was an overall improvement in various facets of students' life, problems are still encountered. Few of them are, reaching out to each student individually due to the large number of students in the class, tracking outcome, lack of motivation among students etc.



Best Practice - 3

1. Title of the Practice: Inculcating the spirit of research among faculty for a progressive technological growth

2. Objectives of the Practice:

To improve quality in the teaching-learning process

To enhance quality in UG and PG projects

To publish papers in refereed International/ National journals and conferences

To undertake collaborative projects and consultancy for long term interaction with the academia and industry

To attain IPRs

To get research projects from several funding agencies

3. The Context : Research is a never ending quest for knowledge, which may be used to promote progress for the society. Today's world is rapidly developing, giving way and scope for new research initiatives to have a better life. To keep up with the growing needs and demands has become most essential parameter. To meet such demands, continuous research and development of new products and projects has become the need of the hour. This motivated the college to strengthen R&D activity that focuses on various independent domains and encourages multi disciplinary research.

4. The Practice : Teaching and Research must go together. With this aim, research is promoted by the college in the following ways and means:

Providing opportunity to work at higher level institutions like IITs/IIMs for about six months

Sponsoring for seminars/conference/workshops/Orientation courses /refresher courses like STTPs, FDPs, SDPs, etc. by paying registration fee, TA/DA with paid leave

Financial incentives like paying registration fee for publications in journals and conferences and TA/DA for presentation of technical papers in various International/National conferences

Modernization of laboratories with research facilities

Exposure to international expertise by organizing invited lectures, work-shops, seminars and conferences, etc.

Providing high end computing facilities, with internet, Wi-Fi, and other facilities.

The supporting staff is also encouraged to upgrade their skills by being deputed to relevant authorized /recognized training centers in their respective trades/fields.



5. Evidence of Success Owing to the hard work done by the members of faculty, the following achievements have taken place in the Organization

Some teachers availed the facility and obtained their Ph.D

Some teachers availed the facility and pursuing their research submitted thesis

No. of international publications by the faculty: More than 40

No. of national publications by the faculty : More than 25

There is a tremendous improvement in teaching learning process as the faculty is exposed to latest areas of their topic of research. Further they are able to help the faculty who are fresh to initiate research. Good number of teachers got admission into Ph.D. at various universities. Students publications have increased and quality of student projects, both UG and PG, has been enhanced.

6. Problems Encountered and Resources Required

Trying to inculcate the habit of doing research among many faculty which helps them to grow and the growth of college too

More PG courses have been introduced recently so that teachers can teach advanced subjects which helps them in their research. Trying to get qualified and experienced teachers to fill the gap.

Industry institute interaction should be improved. The college has tied up with some industries to improve quality in research


PRINCIPAL
Vaagdevi College of Engineering
Bollikunta, Warangal-506003