

## 7.2 BEST PRACTICES – I

### 1. TITLE OF THE PRACTICE

Industry oriented Curriculum Design and Teaching – Learning Process.

### 2. OBJECTIVES OF THE PRACTICE

- To design Industry oriented curriculum to meet out the requirements and incorporate the recent technologies in the syllabus
- To promote direct industry linkages with the departments and enhance In-plant training, Industry visits, field/site visits, Industry projects and Internship's opportunities to the students and also to train the faculty in the recent advancements
- To involve students and faculty in testing and consultancy activities for governmental and nongovernmental organizations and provide solutions for industrial /societal problems
- To collaborate with industries for R&D activities and establish industry sponsored laboratories / Centre of Excellences (CoEs)

### 3. THE CONTEXT

The Contextual features or challenging issues addressed are:

- Providing provision in curriculum to accommodate Employability Enhancement Courses (EC) and industry oriented advanced courses satisfying both statutory body requirements and Programme specific demands
- Scheduling more visits to industries for providing exposure to industrial practices in the academic calendar
- Establishing relationship with reputed industries required prolonged and consistent efforts and involvement of faculty
- Bringing experts from industry to teach a part of the syllabus
- Increasing the allowances / pay offered to the students during trainings/ internships
- Making travel arrangements to remote sites / far off places for industrial visits where industries / huge infrastructure projects are under progress
- Ensuring safety at work places during student's visit / training

### 4. THE PRACTICE

- 98 MoUs are active with reputed industries and Government organizations to enhance technical expertise of faculty and students
- 21 Industry experts are nominated for Board of Studies and majority of the courses are introduced based on the industrial requirements and expectations. 29.26% of syllabus content has been revised.

- 74 value added courses are offered with the help of industrial experts in advanced topics / skill enhancement techniques
- R2018 and R2020 curriculum include industrial training (2 credits) and internships (12 credits) as mandatory courses
- During the academic year 2020-2021, 2601 projects/internship are carried out and 1278 students have collaborated with industries for training related work.
- 360 faculty members and 68 non-teaching staff took part in various training programmes relating to their areas of specialization.
- 12 Industry sponsored labs / industry supported labs are established. In collaboration with appropriate industries, 7 Centers of Excellence (CoE) are functioning. KEC is serving as a knowledge partner for 7 early-stage businesses through the Innovation Voucher Programs (IVP).
- Joint research activities with industries are facilitated and 2 number of patents are granted and 51 ideas have been published in patent journal
- 264 Testing and consultancy activities carried out by the faculty to outside agencies with majority of student participation
- 244 Alumni (who are entrepreneurs / occupying responsible position at industries) are called for interaction to enrich student's knowledge on field practices
- Weightage is given for industry linked activities in performance appraisal of faculty and departments.

## 5. EVIDENCE OF SUCCESS

- In AICTE-CII survey for identifying the 'Best Industry linked Technical departments and Institute', KEC has been ranked under Platinum award Category
- NIRF India Ranking 2020 ranked KEC 135<sup>th</sup> position in Engineering Category and ATAL Ranking of Institutions on Innovation Achievements (ARIIA) 2020-Categorized KEC as band 'A' institution (rank between (6-25) in category of Private or Self-financed College/Institute
- Various Magazines have ranked KEC in top positions: India Today (2020)- 77<sup>th</sup> Position; The Week (2020) - 56<sup>th</sup> Position; The Competition Success Review Survey (CSR)- 5<sup>th</sup> Position in Placements, USP, Social responsibility, Networking & Industry Interface Category in Top 25 Engineering College.
- Renowned industries have collaborated with KEC for Centres of Excellence (CoE) establishment: CoE in Robotics and Automation with Fanuc, Bengaluru, CoE in Energy and Building Automation with Schneider Electric India, Bengaluru, CoE in Product Design and Development for Automotive interior parts with Macbro, Erode, CoE in Data Sciences with Nvidia, Bengaluru and CoE in Energy Studies with Fluke India, Coimbatore.

## 6. PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

### Problems encountered:

- Establishing relationship and entering into MoU with reputed industries takes at least a year. Follow up activities to retain the partnership becomes a challenging one.
- Finding slots with industries for student /faculty training during summer and winter vacations and for field visits are becoming difficult.
- All industries are not ready to pay stipend during the period of internship for students
- Establishment of industry sponsored research laboratory is a constraint for a rural based institution.

### Resources required:

- A full-fledged team to take care of industrial relations is required in each department in addition to central IIPC team.
- An yearly budget to visit the industries, to train the faculty in industries during vacations has to be provided
- To perform consultancy activities, required equipment have to be procured.

## 7. PLEASE ADD ANY OTHER INFORMATION THAT MAY BE RELEVANT FOR ADOPTING/ IMPLEMENTING THE BEST PRACTICE IN OTHER INSTITUTIONS

In order to implement and improve the practice, following measures may be adopted:

- “Best department in implementation of MoUs and industry linked activities” and “Best performing faculty in IIPC activities” awards are constituted and it acts as a driving force for enhancing the industry linked activities
- Field visits for each course or combining few courses help in learning new technologies and identifying local industries problems
- Adjunct faculty scheme and floating industry-oriented Value-added courses to students enhance their learning process
- Establishing good network with renowned industries will yield in industry sponsored labs or COE



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