

## **Best Practice 2**

Title of the Practice: Research and Development For Sustainable Society.

### **Objectives:**

Engage faculty and students in cutting-edge research initiatives that are connected to both academia, industry, and society by promoting multidisciplinary studies in state-of-the-art technologies.

### **Context:**

A paradigm shift is currently taking place in the field of engineering education, with the learner increasingly bearing more responsibility. Students are taught on a higher level, encouraged to innovate, and instilled with the belief that they can positively impact the community in which we all live. The design of the curriculum and course selections align with important concerns of the present and future as well as sustainable technology that benefit society. Credits for industry participation are awarded by the course framework through internships, major projects, and mini projects. The internship offers exposure, chances to apply the knowledge acquired in the classroom, and the chance to design projects that meet societal issues.

### **Practice:**

The curriculum is redesigned to incorporate the industry needs and the socio-dimensional subjects that would enhance the student self-learning and the projects they take up address the problems of the society. Through course-based projects, the experiential learning component is increased. Additional expertise over and above the curriculum and as per the market needs is offered through Certificate Courses on a continuous basis. Students are motivated to take up projects of social relevance from II Year of their study. Infrastructure and seed money is provided to implant the ideas at STARTUPS & INCUBATORS, a facility created for the stakeholders for incubation. Advanced training and mentoring to the students is given through Research and Entrepreneurship Development Cell to realize the idea into application/ product at the institution.

### **Evidence of success:**

Some of the projects carried out by faculty and students won best prizes at national and international level competitions. Socially beneficial projects were implemented by students as a part of their curriculum. Many patents have been filed in various engineering field and few student startups were established. Manufacturing of bricks using plastic waste sponsored by ALEAP, Himambot-Fault detection bot for frozen terrains, Digital Eye, Robo Arm for the visually impaired are few success stories of our institution,

### **Problems Encountered and Resources Required:**

The students come from a diversified background, so balancing the curriculum changes between fast learners and slow learners, maintaining equilibrium between Research and Academia, identifying the research problems and potential sponsors, and continuous training on upcoming technologies are few problems encountered.