



## SCMS SCHOOL OF ENGINEERING & TECHNOLOGY, KARUKUTTY

2018-19

### BEST PRACTICE 1

### RESEARCH AND PRODUCT DEVELOPMENT

#### 1. Title of the Practice: Research and Product Development

#### 2. Goal

Develop innovative product and technology having social impact by applying the multidisciplinary engineering principles.

#### 3. Context

The Fablab mainly focuses on developing socially relevant projects in a cost-effective manner by employing the latest technologies like 3D printing, Laser Cutting, Electronic Workbench etc. The implemented projects not only impact the society but also enhances the theoretical and practical knowledge of the student community.

#### 4. The Practice

To achieve the desired goal, several practices followed in the Fablab are listed below

- Organizing training programmes on the latest technologies. Soft-wares and machines available in Fablab to our students and outside world.
- Formulating project groups consisting of students and faculty members.
- Organizing project discussions, Idea fest to identify the problems faced by the society, analysing innovative Ideas.
- Reviewing and feedback sessions with expert committee on the ideas and solutions developed.
- Encouraging and guiding students to participate in the technical project competitions and submitting proposals for funding.

#### 5. Evidence of Success

The projects developed in Fablab received several national and international recognition, few of them are listed below

Sl.no.	Title	Awards/Recognition	Level	Year
6	Brain Wave Nerve Excitation for Physically Disabled	GANDHIAN YOUNG TECHNOLOGICAL INNOVATION AWARD	National level	2018
7	A De-Addiction Coil for Drug Addicts	First Prize at AICTE-ECI Chhatra Vishwakarma Awards, IIT Delhi	National level	2017
8	Life Detection and Rescue System Using Snake Robot	3rd Prize, Third Dialogue India Academia Conclave (IIT, Delhi)	National level	2017
9	Bionic Haptic Arm	Bagged 2 nd prize in Tech Fest conducted by KSCSTE	State level	2016

## 6. Problems Encountered and resources required

Problems encountered during project Implementation are listed below

- Procuring latest sensors and controllers results in considerable delay.
- Machine breakdown and components damage also hinders the project progress.
- Transforming prototype to commercial products requires support from industrial experts.
- Students finds difficult to meet project deadlines because of the busy academic schedules.

## BEST PRACTICE 2

### TIE UPS WITH LSGS, STATE & CENTRAL GOVERNMENT BODIES

#### 1. Title of the Practice: Tie ups with LSGs, State & Central Government bodies.

#### 2. Goal

To provide technical support to various government bodies to resolve their water sector challenges.

#### 3. The Context

Many government bodies in Kerala face water scarcity and quality degradation. Though they have funds allocated to deal with these issues, they lack technical expertise to find appropriate solutions that can be implemented in a specific locality. An engineering institution with adequate human resource can handhold and develop the capacity of government bodies to face these challenges.

#### 4. The Practice

SCMS School of Engineering & Technology (SSET) collaborate with govt. bodies to conduct city scale water audits, preparation of water quality atlas, organizing capacity building programs and development of water policies.

#### 5. Evidence of Success

The tie up of SSET with government bodies have resulted in the development of water management plans, detailed project reports and formulation of projects for ground level implementation as shown in the following table.

Sl. No.	Govt. Body	Year	Evidence of Success
1	Koratty Grama Panchayat	2014	Development of water quality atlas, Restoration of Chirangara public pond
2	Kochi Municipal Corporation	2016	Development of Kochi Water Policy
3	Meloor Grama Panchayat	2018	Water audit report for the Panchayat and Flood mitigation plan
4	Guruvayur Municipality	2019	City scale water audit report & Journal publication

#### 6. Problems Encountered and resources required

Major problems encountered include engagement of stake holders and lack of secondary data. Many a time SSET had to mobilize human resource (faculty & students) and monitoring instruments to collect primary data from the field. Training programs for capacity building were organized using institution.