## Best practice No. 1

## 1. Title of the Practice:

Organizing National Level Technical Event (IMPULSE, Technofest, NICE, PATW etc.)

### 2. Objectives of the Practice:

- The objective of the event is to bring the students of various streams from different institutes on a common platform where they are encouraged to share knowledge and innovative ideas.
- To exhibit the talents and skills of the future Engineers, both in Technical and Non-Technical themes organized in the events.
- To develop leadership qualities, organizing skills, project management skills and interpersonal skills in the student's.
- To explore about student's hidden potentials through various competitions
- To make students feel confident to face the present and future challenges.

#### 3. The Context:

National level technical events organized by various student's associations of Institute under the guidance of faculty members during academic year. Students from all over India participates in various competitions (Mechtrix, Paper Presentation, Technical Quiz, Poster Presentation etc.)

#### 4. The Practice:

IMPULSE & TECHNOFEST - Under these about 20 events of competitions are organized and students from various colleges are participated. Events are:

- Mechtrix- Waste to Best
- Paper presentation Reach out to world
- Robo War May the best machine win
- Optical Archery Hitting the bulls eye
- Tech Quize Test your limits
- Blind coding Coding makes the fun
- CAD War Design optimization
- Bridge Making Connect the world
- Link Ladder Build to win
- Box Cricket Game for fun
- Game of Thrones The wars to come
- Treasure Hunt Search to win
- Buoyancy Rise above
- Market King Make your empire
- CANVAS Showcasing cutting edge issues
- Shark Tank The start up battle
- Race to Distiny Be the winner
- Brick Race Get your senses together
- Baloon Blast Game of fun
- Hydro Launch Only crazy thinkers can win
- Brain Olympics Think smart play smart
- Kaun Banega Champion A champion will rise

- Smack Down Pin to win
- Twist and Tricks Quicker picker upper
- Logica Test your brain

NICE (Nurturing Intelligence in Curious Engineers) - Institute host North Maharashtra University (NMU) region competition. Every year teams from NMU region participate and two winning teams are qualified for western region competition. Councelling of students of Junior colleges in 'Khandesh' region is done by participating teams of NICE for career oppurtinities in Engineering education. The objective of the event is to align the students in the respective branch they select. This will motivate students to carry out research and innovation while studying Engineering and also orient their mind to gain insight into meaningful technocrats.

IET-PATW (Institution of Engineering & Technology - Present Around The World) This is a technical paper presentation competition organized at university level and winner of this event participate in regional level competition. This event aims to provide platform to the passionate students from educational institutions present their ideas.

#### 5. Evidence of success

The success of students in academics and placements reflect after the participation in these type of events. Project management, presentation, innovation and technical abilities are enhanced amongst the students. Students take admission on the basis of their interest so that after completion of course, the society gets quality Engineers.

## 6. Problems encountered and resources required

These events are organized during academic year in a compact schedule of teaching and learning. Therefore, some of the students are reluctant to participate. Dhule is growing city, but it is difficult to find sponsors for these events. Therefore, total financial burden is to be borne by Institute.

# IMPULSE:









# Technofest:



# NICE and PATW:









## Best practice No. 2

## 1. Title of the Practice:

Running Various Technical Clubs. (Mega ATV, E-vehicle, Energy for future, Robotics Club)

## 2. Objectives of the Practice:

- To provide platform to the students to apply technical ability to test the concept by practical applications.
- To develop better understanding of Technical Concept by hands on practice to the students.
- To provide a holistic personality development.
- To enhance project management, financial management, team building skills among the students.
- To enhance interpersonal and communication skills.
- To improve employability of the students.
- To encourage patent filling amongs faculty and students
- To inculcate innovative approach in institution
- To enhance the research culture

#### 3. The Context:

Technical Clubs formed by individual departments to provide platform for the students to validate and apply their concepts in practical application. It provides place to the students for introduction of concept and understanding for innovation.

#### 4. The Practice:

MEGA - ATV Club: Students from various departments voluntarily join this club and contribute to design, development and manufacturing of racing car. This manufactured car participates in Mega - ATV competition held every year. Mega - ATV is National levels inter collegiate Engineering Design Competition for UG students, organized by "Auto Sports India". In this competition, vehicle undergoes for vehicle technical inspection, car completion for testing drag, flat dirt and endurance.

E-Vehicle club: Objective to form this club is to develop energy efficient E-bike, which will give students opportunity to enhance their innovative skills.

Energy for future: Objective of this club is to develop projects on renewable energy. The students of this club participated in various paper and project presentations. Many projects are developed in this club and patented jointly with faculty and students.

Robotics Club: Objective of this club is to enhance creative thinking about hardware and software programming skill, like Embedded Systems, Internet of Things, Artificial Intelligence and Machine Learning. Students from all departments join this group voluntarily to realize their passion as a team work.

#### 5. Evidence of success

The success of Technical clubs' members reflect by winning prizes in various paper and project presentation competitions. Patents are also filed on the basis of projects developed by these clubs. Project

management, presentation, innovation and technical abilities are enhanced amongst the students and faculties.

## 6. Problem encountered and resource required

Membership of these clubs is voluntary. Therefore, all students do not participate. Financial burden is jointly beared by Institute and members of the club. Therefore, large scale innovation projects, which need huge amount of funds cannot be taken.

# E-vehicle Club









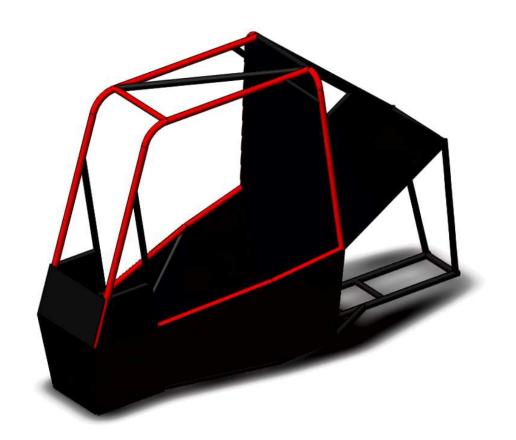
# Mega ATV Club



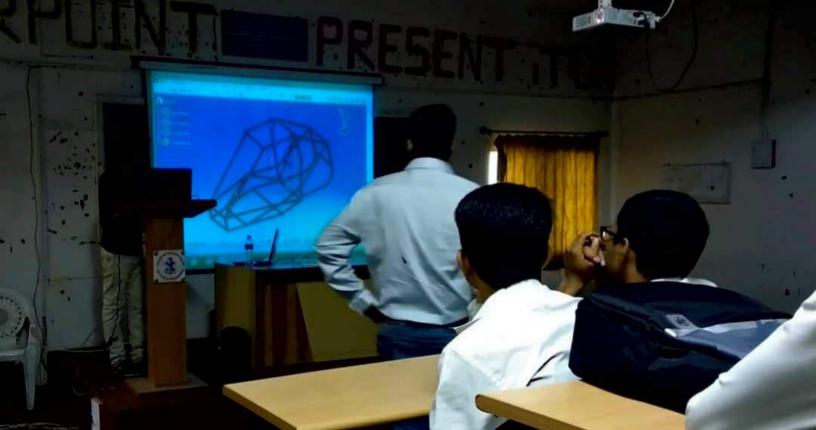
















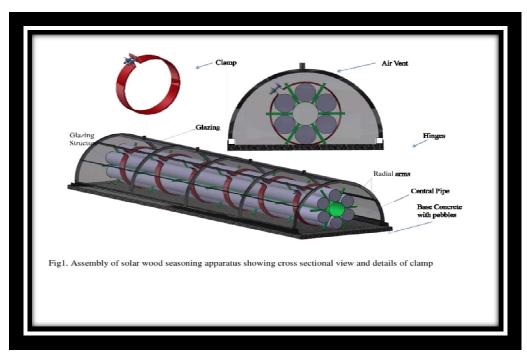








# **Energy for Future:**



Solar tunnel dryer for wood seasoning cum straightening



Bamboos before and after seasoning



Tubular Hemispherical Solar Water Heater (75 LPD)



Single largest system of 500 Liter per Day (LPD)



Ice to water convertor cum water pasteurizer



Foldable Solar Air Heater



Foldable Solar Air Heater



Pedal operated retrofit pump



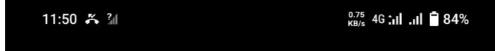
Solar Disinfector



Hemispherical Solar Water Heater

























An automated system for solar dryer



A smart Al drone which tracks any object from air

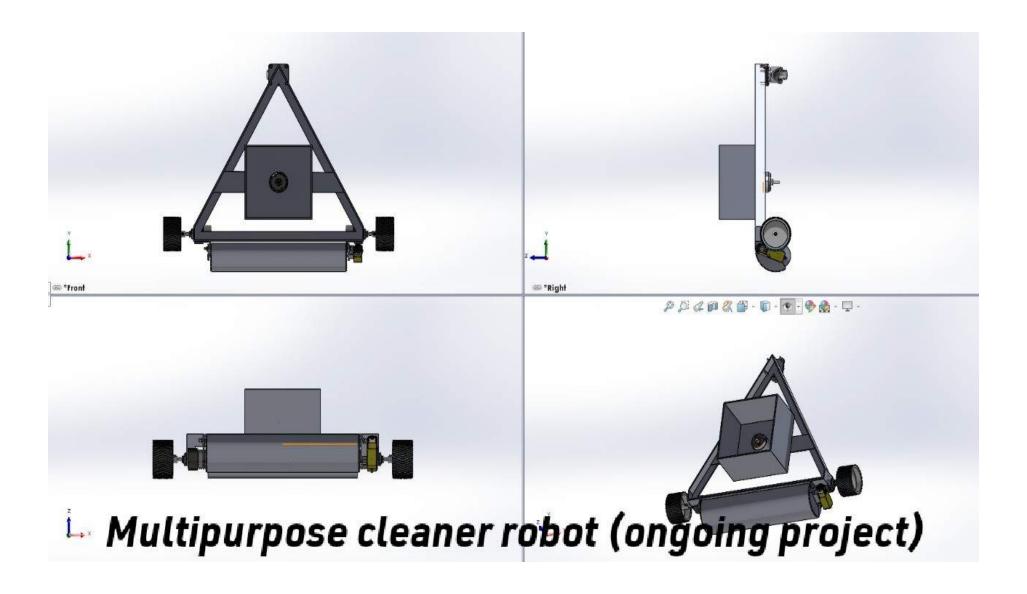








A flag hosting drone



Winner at MET and HTS 2022 Innovative Pavilion organized by ASM International @Mumbai Ist and IInd place winners (Total prize amount Rs. 1.00 lac only)





# Participated in startup competetion @ College of Engineering, Pune

