Department of Freshman Engineering

Design Thinking Club

Academic Year 2020-21

1. **Design Thinking and Critical Thinking Workshop**

   ➤ Workshop on **Design Thinking and Critical Thinking** from Feb 28th, 2021 to March 2nd, 2021 was given by Prof. Balarama Durai, Professor, NPTEL and SIBM, Pune.

Report

Pre Workshop:

The idea of conducting a workshop to provide hands on experience to the students started on Jan 7th, 2021. The resource person was identified and after seeking the necessary approval from the college authorities, the dates of the workshop were fixed keeping in mind the availability of the resource person and our academic calendar.

Then after a series of discussions with the resource person over phone, we felt that providing self learning material to the students before attending the workshop will be advantageous, as the students can spend more time in working during the three days of workshop.

Later, 100 students were selected based on their enthusiasm to work on projects Principal and HoD, addressed all the selected students on 5th February, 2021 through an online meet from 6.15 p.m to 6.45 p.m.

Multidisciplinary teams consisting of 5 members in a team were formed and they were informed to browse various problem statements available on AICTE, UGC and other MNC websites. In addition, they were also advised to observe meticulously for identifying new problem statements.

The resource person, Dr.Bala Ramadurai, Professor at NPTEL, SIBM Pune shared 16 Youtube videos and three assignments for the students. To make this happen, the students were asked to join the Google Meet from 16th February to 20th, 2021 from 6.30 p.m to 7.45 p.m.

Students were given a week's time to discuss and identify problem statements. Teams 1 to 10 presented their problem statements on 22nd February, teams 11 to 20 presented their problem statements on 23rd February from 6.00 p.m to 8.30 p.m.

During the workshop:

All the students actively and enthusiastically participated in the workshop. The pre-learning sessions helped them to understand the concepts easily and facilitated more time to work on their problem statements and more time and opportunity to interact with the resource person. On the last day of the workshop many teams have either completed doing a website or half way through an app or made a prototype.

Mr. Santosh of Mechanical Engineering Department who was identified from the department has extended a lot of support and cooperation.

Post Workshop:

After the Semester end examinations, students should be motivated to complete the projects they have taken up or select another problem statement. Weekly progress of the work has to be monitored. In case, the students ask for any help in emerging technologies, mentors should be identified to support the students.

Outcomes of the workshop:

Team 18-Techie Tribes Blending gaming and academics. Worked on the app taking Physics concept.

Team 3: Suggested the students to start working on the app (TOME- A very large book)

Team 15: Prototype was made based on their problem statement.

We thank the Management and Principal for granting permission for conducting this workshop. Our thanks are due to the convener of the workshop Dr.G.Neeraja Rani, HoD- Freshman Engineering and Convener of the workshop for being a constant support and for her valuable pieces of advice in planning and executing.

Feedback: On the last day of the workshop an online feedback was taken. Majority of the students gave either 4 or 5 for the resource person's passion and enthusiasm in dealing with the concepts. Almost all the students agreed that real time examples were given. Participants agreed that the resource person delivered the content clearly. **For the question, After attending the workshop, I learnt…… sample responses are given below:**

- A lot and I increased my ability to work with team
- How to work in a team and what design thinking is
- This workshop was very insightful and made absolute sense in terms of the problem statement their application. I am thankful for having the opportunity to attend."
- Questions are important than solutions to it
- How to solve problems , time management , working with many people
- How to be a Design Thinker and Work on a Project
- How to solve problems using Triz analysis
- How to interact with new people around me and to work as a team, and to solve some basic problem
- How to innovate ideas.
- Time management, to not over think, team spirit and adjusting in the environment.
- How to think differently
- How to empathize ,analyse,solve and test a problem
- I learnt how to approach a problem and solve it. I also learnt how to work in a team .
- What all steps to be followed before trying to create an app
- How to solve a problem
- Awareness on different problems faced all over.
- I wish to have this kind of workshops more and more

For the last question on any suggestions……..sample responses are given below:

- Nothing...but I was disappointed that we meet sir through virtual meeting...
- If it was a direct meet in the work shop it would be more nice
- No . Everything was good .
- It was an amazing workshop. Only problem : conducted during exam time.
- Improvement of intercom and wifi
- Need as much help as possible from faculty to develop our project
- Session was mind blowing
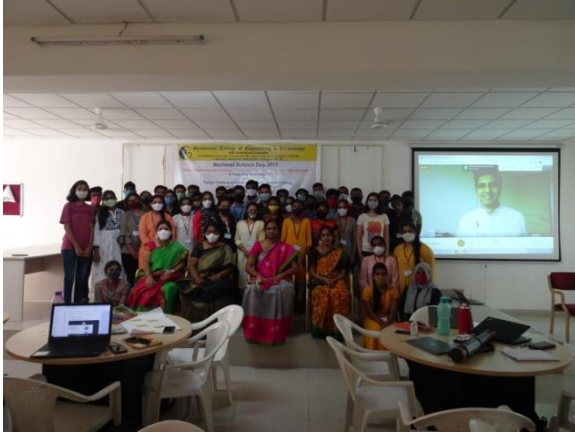- Every inch was perfect but, offline would have been more fun.
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Coordinator(s)
Dr.B.Nagamani-Associate Professor of English
Ms.V.Manjula- Assistant Professor of Physics
P.S: Photographs are added in the next page.

Glimpses of the Workshop

Steering committee with the resource person.

Engineers in the make- engrossed in work.

Posing for a photo.

Faculty interacting with the students.

Building a prototype.

Learning while doing.

As busy as bees.

Teams at work

➢ Project Exhibition conducted on July 24th, 2021.

➢ **List of Projects:**

Team No.	Title of the Project
1	Automation Parking System
2	Automatic Drip Irrigation System using Solar C
3	Self-repeating robotic arm
4	Growpal
5	Reducing the queue time at billing counter
6	Tome-The modern library App
7	An E-commerce initiative for farmers
8	Text bin
9	Multi-purpose device
10	Phytech
11	Medi bot
12	Solar Power Charger
13	Vertical axis wind turbine
14	Waste Crushing Dustbin
15	Face tracker using open cv and Arduino

Design Thinking Video links

Robotic Arm Video Link
https://drive.google.com/file/d/1vrZ212HQe5f-qH3k4vL-h4GhCRkN5Mi8/view?usp=sharing

TOME App Video link
https://drive.google.com/file/d/1-I3ipbDsBtBdhuNl5cq1fSyX7NsZMoXo/view?usp=sharing

Solar Project Video link
https://drive.google.com/file/d/1lmnXFEYb4zkc6acgFvF44Gq1CkqOaEvW/view?usp=sharing