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# A Report on

A Competition

on

"3D Printing Workshop"

Organized by

Mechanical Engineering Dept.

&

GIT-IQAC

on

# 02/12/2021

Gandhinagar Institute of Technology

Academic Year 2021-22



Level:- Departmental Category:- Workshop Date:- 02/12/2021 (1 Day) No. of Resource Person: 2 No. of Participants:- 28 Coordinator and Co-coordinator name: Prof. Jatin M Patel (Coordinator) Prof. Dhaval P Patel (Co-Coordinator)

# **Mode:- Offline**

#### **Objective:**

3D Priting technology is one of the most popular manufacturing process in the industry. As a mechanical engineer, a student should be aware of advanced manufacturing process like 3D priting. To fulfill this skill in the students, a training workshop on programming in ultimaker cura and operate modeling software Solidworks and practical session on 3D printing machine to make different part as application has been organized. This program will help students with their projects, competitions and create better career profiles.

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#### **About Workshop:**

This workshop was organized by the Mechanical Engineering Department and GIT-IQAC Cell of Gandhinagar Institute of Technology. 28 students have participated in this workshop. The goal of the workshop was to enhance the caliber of students for a recent requirement in the field of Manufacturing Process. The event has been divided into three expert session. The first session is about introduction different additive manufacturing process and introduction of 3D Printer. The second session is about solidwork CAD tool in which how to operate differen part modelling command to make 3D part as per requirement. The third session is about practical on 3D Printer to make different mechanical part or article like key chain and understand how to operate machine.

#### Session wise content:

#### **Session-1: Introduction**

In the first session, the session was started by Prof. Jatin M Patel by delivering the introduction of 3D Printer and their importance in the industry. Prof. Jatin M Patel introduced the additive manufacturing to the student and aware them of the importance and application of the 3D Printer.



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Prof. Jatin M Patel has given the basic introduction



Prof. Jatin M Patel delivered the introductory session regarding the importance of 3D Printer in the industry.

# Session-2: Soldiwork CAD Tool

In the second session, the session was started by Prof. Dhaval P Patel and Prof. Amit Patel by delivering the introduction of modeling tools and their importance in the industry. Prof. Dhaval Patel introduced the SolidWorks software to the student and aware them of the importance and application of the SolidWorks. Participants have been given 60 minutes to complete the part modeling. Based on the time taken to complete the part modeling points have been given to the participants.



Prof. Dhaval P Patel has given the basic on Solidwokrs



Making different 3D Model component on Solidworks



# Session-3: Practical on 3D Printer

The third round was started by making key chain on 3D printing machine. Students were awaired about how to operate 3D printer? What are key point required to maintaining machine? Make key chain as per practice on second session in Solidwork.



Participants understanding the 3D Printer Machine



After successful completion of the event participants with the co-ordinators



**3D** Printing process

#### **Outcome:-**

After completion of the workshop, students were come to know about the use of 3D Printer for industrial applications. They have studied all the fundamental modules of the 3D Printer, such as cura and solidwork software. Very good feedback has been obtained from the students regarding their gain during the workshop.