

Event Report

- 1) **Name of Event:** Orientation on LASER Cutting and 3D Scanning
- 2) **Nature of the Event:** Orientation Workshop
- 3) **Date & Time:** 05th June 2026, 10:00 AM to 5:30 PM
- 4) **Venue:** Mentor Room & Maker Lab - 2
- 5) **Mode of Event:** Offline session
- 6) **Organized by:** GUIITAR Council, GSFC University, SSIP, Startup Gujarat and IIC (MoE GoI)

8) Objective of the Event:

The orientation programme on **Laser Cutting and 3D Scanning** was organized to familiarize students and participants with modern digital manufacturing and reverse engineering technologies available at the GUIITAR Council.

The key objectives of the orientation were:

- To introduce participants to the **fundamentals of Laser Cutting technology** and its applications.
- To provide an overview of **3D Scanning technology** and its role in digital product development.
- To demonstrate the process of converting physical designs into **digital CAD models** through 3D scanning.
- To familiarize participants with the basic workflow of **designing, preparing, and fabricating components using laser cutting**.
- To create awareness about the applications of these technologies in **product design, prototyping, innovation, reverse engineering, and manufacturing**.
- To encourage students to utilize the facilities available at **GUIITAR Council Maker Labs** for academic projects, innovation, and prototype development.

9) Resource Persons Involved: **Mr. Amit Duggal** – Senior Executive (Technical), GUIITAR Council.

10) Number of Participants: 54, Annexure – 1

11) Brief of Event:

The orientation programme provided participants with a practical introduction to **Laser Cutting and 3D Scanning technologies**. The session focused on understanding the basic principles, workflow, equipment, applications, and safety aspects associated with both technologies.

During the Laser Cutting orientation, participants were introduced to the basic working principle of a laser cutter, material selection, preparation of digital designs, and the process of converting 2D digital drawings into physical components. The participants were also familiarized with the potential applications of laser cutting in **rapid prototyping, model making, product development, fabrication, and customized designs**.

The 3D Scanning orientation focused on the process of capturing the geometry of an existing physical object and converting it into a digital representation. Participants were introduced to the applications of 3D scanning in **reverse engineering, dimensional inspection, product redesign, documentation, and digital modelling**.

The demonstrations helped participants understand the complete workflow from **physical object → digital data → design modification → prototype/fabricated component**.

12) Learning Outcomes of the Event:

1. Participants gained a basic understanding of **Laser Cutting and 3D Scanning technologies** and their applications.
2. Participants understood the connection between **physical products and digital design data**.
3. Participants learned the basic workflow of **3D scanning, reverse engineering, redesign, and rapid prototyping**.
4. Participants developed awareness of **product redesign, fabrication, and prototyping processes**.
5. The session encouraged **hands-on learning, experimentation,**

innovation, and problem-solving.

6. Participants were encouraged to explore **project-based innovation and prototype development** using GUIITAR Council Maker Lab facilities.
7. Participants gained exposure to technologies relevant to **industry, engineering design, product development, prototyping, and manufacturing.**

12) Important Photographs



3D SCANNING



Participants



Explanation of 3D Printer and 3D Scanner Concepts

Annexure-1

Number of Participants:

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